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No. 1312

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CONTENTS

MAJOR CROP PROGRESS AND WEATHER REPORTING

Autumn Plowing for Increased Production, Soil Fertility Urged
(A. Trubnikov; SEL'SKAYA ZHIZN', 17 Sep 81) 1

Briefs

Healthy Seedlings 5
Mass Sowing of Winter Crops 5
Autumn Plowing Problems 5
Expanded Grain Sowings 6
Field Fertility Work 6
Winter Crop Sowings 6
High Quality Seed 7
Interfarm Tractor Brigades 7
Plowing Complexes in Operation 7
Plowing of Fallow 7
Chulpan Winter Rye Variety 8
Winter Crops Inspected 8
Autumn Plowing Rates 8
Successful Grain Harvest 8
Kurganskaya Oblast Rye Sowings 8
Winter Rye Preferred 8
Soil Preparation Work 9
Autumn Plowing Completed 9

LIVESTOCK FEED PROCUREMENT

Livestock Feed Operations Reviewed
(SEL'SKAYA ZHIZN', 4, 10 Nov 81, SOVETSKAYA ROSSIYA,
26 Sep 81) 10

Progress, Resources Discussed
Bryansk Area Shortcomings, by G. Krasnoperov
RSFSR Feed Shops Evaluated, by A. Bochkarev, et al.

Greater Utilization of All Livestock Feed Resources Urged
(L. K. Ernst; VESTNIK SEL'SKOKHOZYAYSTVENNOY NAUKI, Oct 81). 16

REGIONAL DEVELOPMENT

Procurement Minister on Flour, Feed Situation in Estonia
(August Pedajas; RAHVA HAAL, 13 Oct 81) 26

AGRO-ECONOMICS AND ORGANIZATION

Kirghiz Procurement Minister on 'Direct Connections'
(M. Umuraliyev; SOVETSKAYA KIRGIZIYA, 13 Nov 81) 32

Private Sector Examined, Exploited
(Various sources, various dates) 36

Development in Kirghiz SSR, by O. Osmonov
Livestock Purchase Terms Listed, by Ya. V. Zhigarevich
Cattle Purchase Advantages
Appeal for Surplus Production
Belorussian Official Expresses Concern, by Ye. Bogdan
Private Acreage Allocations Listed

TILLING AND CROPPING TECHNOLOGY

Measures for Increasing Grain Production Reviewed
(Ye. Khlebutin; PRAVDA, 9 Feb 81) 47

Two-Stage Harvesting of Millet in Orenburgskaya Oblast
(V. Krasavin; URAL'SKIYE NIVY, Aug 81) 50

Groat Crop Production in Central Chernozem Zone Discussed
(Grigoriy Yakovlevich Varob'yev; SEL'SKIYE ZORI, Aug 81) ... 53

Briefs

Millet Sowings Expanded 58
Kurskaya Oblast Groat Crops 58

MAJOR CROP PROGRESS AND WEATHER REPORTING

AUTUMN PLOWING FOR INCREASED PRODUCTION, SOIL FERTILITY URGED

Moscow SEL'SKAYA ZHIZN' in Russian 17 Sep 81 p 1

[Article by A. Trubnikov, Belgorodskaya and Kurskaya Oblasts: "What Should the Autumn Plowed Land Be Like?"]

> [Excerpts] For the third year in a row, the farmers in the central chernozem zone have been confronted by unfavorable weather conditions. But in those areas where the caprices have been countered by good organization and a complex of advanced agricultural practices, good yields have been obtained. An important element of these agricultural practices has been autumn preparation of the soil. The fertility level of the fields has been determined to a considerable degree by precisely this soil preparation work.

Roughly identical conditions prevail in Ivnyanskiy and Prokhorovskiy Rayons in Belgorodskaya Oblast. However, during the past five-year period the average annual cropping power for spring grain crops in the former was 3.2 quintals per hectare more than in the latter. And here one of the inputs for the increase was the high quality of autumn plowing work, carried out during the best periods. Last autumn the workers in Ivnyanskiy Rayon completed almost all of their autumn plowing for winter fallow, whereas the workers in Prokhorovskiy Rayon -- only 77 percent. Accordingly, the grain yields were 15.6 and 13 quintals per hectare respectively. In Chernyanskiy Rayon, where almost one third of the spring crops were planted following spring plowing, each hectare produced only 10 quintals of grain. For the oblast as a whole, more than 200,000 hectares of freshly plowed soil had to be sown and this resulted in a considerable shortfall in output. Similar situations were observed in other oblasts of the chernozem zone.

The chronic delays taking place in connection with autumn plowing are alarming. In Kurskaya Oblast, for example, from 8 to 29 percent of the areas were plowed in August during the past five-year plan. Nor is an adequate amount of soil preparation work being carried out in September and yet it is early autumn plowing, especially that carried out in August of the year, that responds best to the requirements imposed upon it. Nor are the required quantities of fertilizers always applied during the autumn months. In short, autumn plowing in the zone is a weak link in the agrotechnical complex.

The farmers, aware of the above, are striving to correct the mistakes of past years. Thus this year the kolkhozes and sovkhozes in Kurskaya Oblast carried out autumn plowing on almost 500,000 hectares prior to the beginning of September. This is approximately 40 percent of the plan, almost three times more than the amount plowed by this same date last year and considerably more than during any year of the Tenth Five-Year Plan. In Belgorodskaya Oblast, approximately 370,000 hectares, or 38 percent of the autumn plowing fields, were plowed in August.

The experience accumulated in Ivnyanskiy Rayon is especially instructive. From one to two brigades were created on the farms, with each having from seven to 17 plowing units. The brigades are headed by the secretaries of party organizations or by the chairmen of village soviets. The chief agronomists at the kolkhozes and sovkhozes serve in the capacity of technologists.

Also deserving of attention is the experience of kolkhozes and sovkhozes in Pristenskiy Rayon in Kurskaya Oblast, where two thirds of the autumn plowing was carried out in August. The plowing units were employed in two shifts.

The autumn plowing rates, which were higher than those for past years, were very gratifying. But there is no room for complacency here. By no means have all measures been taken aimed at carrying out a greater amount of early autumn plowing work. For example, the farms in Belgorodskaya Oblast, in accordance with a schedule composed taking into account the available equipment, should have plowed 442,000 hectares in August, but instead the final figure was less by slightly more than 70,000 hectares. The farms in Novooskol'skiy and Chernyanskiy Rayons fulfilled less than two thirds of their August task. As it turned out, the tractors on a number of farms were not operated at night. Nor is the equipment being employed according to the large-group method in all areas. Large amounts of equipment idle time are occuring owing to organizational and technical problems. Up until recently, owing to insufficient assistance being furnished by oblsel'khoztekhnika, one out of every four K-700 tractors lay idle.

On the whole, the kolkhozes and sovkhozes in the neighboring Kurskaya Oblast fulfilled their August tasks and yet they were not completed in Khomutovskiy, Ponyrovskiy, Konyshevskiy and a number of other rayons. The September schedule is under threat of not being carried out. Energetic measures are required in order to increase the plowing rates sharply and ensure the completion of plowing mainly in September. The conditions required for accomplishing this are available.

The effectiveness of fall plowing has decreased sharply in recent years owing to the fact that very little fertilizer is being applied simultaneously with the autumn tilling of the soil. Nor has this shortcoming been corrected this year. Thus, in Kurskaya Oblast, prior to the beginning of September, an average of only 8 quintals of mineral fertilizer had been applied to a hectare of autumn plowed land, prepared in behalf of sugar beets. In Chermisinovskiy Rayon this indicator exceeds 14 quintals, in Manturovskiy Rayon -- 5 and in Glushkovskiy Rayon -- 3 quintals. Roughly the same situation prevailed throughout Belgorodskaya Oblast.

Although the shipments of farmyard manure in both of the neighboring oblasts increased on the whole compared to last year, nevertheless the dosages were still inadequate. Meanwhile, many farms had accumulated large supplies of this valuable fertilizer.

Violations of the agricultural practices are still occurring on a frequent basis. Rather alarming is the fact that the terrain relief is not always being taken into account when selecting the cultivation method. Thus, at the Kursk Rossiya Kolkhoz in Medvenskiy Rayon, a slope approximately 5 degrees in steepness was plowed lengthwise and this can result in soil erosion. Science and practical experience have developed methods for processing the soil of slopes which reduce the erosion processes. In addition to plowing crosswise to the slopes, there is also the method of increasing the depth of the arable layer, multiple-stage and multiple-unit plowing and the use of plows in the absence of mouldboards or sweeps. Unfortunately, these effective methods are still not being employed in all areas. The loosening of soil by layers is also being carried out on only a limited scale. When this method is used, the application of dressings to the soil is more effective and more weeds are destroyed.

It must be recognized that in solving the problem of autumn soil preparation the zone's farmers require assistance from the machine builders and chemical industry workers. For example, the application of small dosages of fertilizer, simultaneously with the principal plowing, was often caused by late deliveries of the mineral fertilizer. And for how many years has a discussion been taking place on the shortage of and imperfections in the machines employed for loading and applying organic materials? But the carts are available today. The same holds true with regard to anti-erosion equipment.

I happened to witness a scene wherein workers attached to the engineering-technical service at the Kolkhoz imeni Michurin in Oboyanskiy Rayon were literally searching through a scrap metal dumping ground in the hope of finding mouldboards for the P-5-35 Truzhenik plow. The fact of the matter is that the PLN-5-35 and PLP-6-35 plows presently being supplied to the oblast do a poor job of turning over and breaking up the soil. The capability of the T-150K tractors assigned for use with them is such that the required speed cannot be achieved on packed soils. If one or two of the units are removed, the assembly loses stability. And the PTK-9-35 plows for the K-700 type tractors, although they produce the required quality of cultivation, nevertheless do not operate in a reliable manner. Over a period of 5 years, Kurskskaya Oblast was supplied with 600 plows for its 390 K-700 tractors and at the present time it still requires more plows!

In the central chernozem zone, owing to a large proportion of row crops, the soils of a heavy mechanical composition become strongly packed. Plows are required which have taller uprights, such that they do not become clogged with post-harvest residues during deep plowing. The farmers are also hoping that no delays take place in the series production of both the T-150K tractor and the strengthened DT-75S tractor.

Our discussion has centered on two oblasts in the central chernozem zone. But the situation is roughly the same in other regions throughout the zone. For example, only 36 percent of the autumn plowing was carried out in August in Lipetskaya Oblast and even less in Voronezhskaya Oblast -- 29 percent. The highest indicator is to be found in Tambovskaya Oblast, where more than one half of next year's spring crop fields were prepared in August.

The decree of the CC CPSU and the USSR Council of Ministers concerning further development of agriculture in the central chernozem zone has tasked the farmers with raising considerably the fertility of the fields and increasing the production of agricultural products. A reduction in the schedules for and improvements in the quality of autumn plowing of the soil represent an important means for achieving the above goals.

7026
CSO: 1824/076

MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

HEALTHY SEEDLINGS--Odessa, 12 Oct--The oblast's farmers have planted winter crops on almost 700,000 hectares. The rain which fell and the high temperatures have promoted the appearance of healthy seedlings. Winter wheat, barley and rye have formed a green carpet over vast areas. Taking advantage of the favorable conditions, the farms in Tatarbunarskiy, Ovidiopol'skiy and other rayons have resolved to expand their winter crop sowings. [By A. Soldatskiy] [Excerpt] [Moscow SEL'SKAYA ZHIZN' in Russian 13 Oct 81 p 1] 7025

MASS SOWING OF WINTER CROPS--Odessa 7 Sep--In late August, productive precipitation fell in various areas throughout the oblast. This fact was not overlooked on the farms. The mass sowing of winter crops has commenced in those areas where the soil is reliably damp. The sowing of winter crops is being carried out in an efficient manner by the machine operators at the Kolkhoz imeni Kalinin in Berezovskiy Rayon, the Kolkhoz imeni 50-Letiya Velikogo Oktyabrya in Kotovskiy Rayon and at many other farms. [By A. Soldatskiy] [Excerpt] [Moscow SEL'SKAYA ZHIZN' in Russian 8 Sep 81 p 1] 7026

AUTUMN PLOWING PROBLEMS--Nikolayevskaya Oblast--The warm nights in the Pributskaya Steppe region are unusually quiet at the present time. One might be led to think that the local farmers have completed all of their field work. Alas, this is far from the case! A strange calm prevails during the busy period devoted to carrying out the autumn plowing. The majority of the farms in Nikolayevskiy Rayon are still far from fulfilling their plans. In view of the fact that the farms have fallen behind in carrying out their soil preparation plans, October has been declared to be a month devoted to shock work throughout both the rayon and the oblast as a whole. The schedules as developed take into account how much work must be performed daily by the tractors and certainly their around-the-clock usage is assumed. However, only weak control has been established over fulfillment of the tasks. Overall, against a plan calling for 1,000 hectares, the highest daily output for the rayon has been 807 hectares and more often than not it fluctuates between 320 and 450 hectares. Of 114 tractor units made available for plowing work, only 60-65 are actually in operation and at night -- only a few. The situation is somewhat better on farms in Berezanskiy Rayon. Here the schedule calls for 950 hectares to be plowed daily and on some days 1,400-1,900 hectares of soil are turned over. But this is achieved only as a result of high tractor productivity during the daytime; many of the tractors are not operated at night -- of 136 units, only 32-35 take to the fields at night. I am confident that not one agronomist will

question the tremendous role played by early autumn plowing with regard to the fate of the future harvest. Why is it that many of them apply themselves to this important work in a listless manner? In particular, autumn plowing work is organized in a very poor manner on the fields in Zhovtnevyy, Novobugskiy and Domanevskiy Rayons. A strange silence reigns even during the day, not to mention the night when this work is generally ignored. Does this not explain why the oblast annually obtains yields which are lower than those being obtained by farms in neighboring oblasts? Indeed there is a popular saying which holds that the ears begin to form in the autumn. This applies both to the winter and spring crop fields, with the productive power of the latter commencing beyond any doubt with the quality and schedules for the carrying out of the autumn plowing work.
[By A. Soldatskiy] [Excerpts] [Moscow SEL'SKAYA ZHIZN' in Russian 16 Oct 81 p 1]
7026

EXPANDED GRAIN SOWINGS--Stavropol', 6 Oct--The kolkhozes and sovkhozes in Apanasenkovskiy, Ipatovskiy, Petrovskiy, Levokumskiy and other large steppe rayons in the kray have fulfilled their planned autumn tasks for the sowing of grain crops. However, they have no intention of putting away their sowing machines. Recent rainfall improved the moisture supplies in the soil and thus there is the promise of healthy seedlings. Thus the field crop growers decided to sow 50,000 additional hectares of wheat and barley over and above the plan. Compared to the spring crop fields, the winter crop fields provide the kray with higher yields each season. An expansion of the sowings represents an important reserve for further increasing the production of grain. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 7 Oct 81 p 1] 7026

FIELD FERTILITY WORK--Stavropol', 15 Oct--More than 45 hectares are presently under irrigation at the Sovkhoz imeni Kirov in Trunovskiy Rayon. An efficient schedule is in operation here for the carrying out of autumn water supply irrigation. In particular, successful work is being performed by "Fregat" operators A. Strogin, G. Zayets and I. Shekhovtsev. Water is being supplied for the future plantations of corn, soybeans and garden crops. Autumn work aimed at raising the fertility of the fields is being carried out on many other farms in Stavropol'skiy Kray.
[By S. Timofeyev] [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 16 Oct 81 p 1] 7026

WINTER CROP SOWINGS--Rostovskaya Oblast--At the present time, the foundation for the future harvest of winter crops is being established in the Don River region. The kolkhozes and sovkhozes plan to sow such crops on 2.15 million hectares of arable land. Serious attention is being given to selecting the best predecessor arrangements for these crops, including sowings on 620,000 hectares of fallow land. In accordance with leading experience, many farms are striving to sow their seed not only in thoroughly prepared soil, together with the placement in the drill rows of the full norm for mineral fertilizers, but in addition they are trying to take advantage of the optimum sowing periods and to employ, to the maximum possible degree, highly promising and highly productive varieties. And such varieties are available, created by Don River region plant breeders -- Rostovchanka, Tarasovskaya-29, Urozhaynaya, Donskaya Bezostaya, Novinka, Donskaya Polukarlikovaya and others. The farms in Millerovskiy Rayon have practically completed their sowing of winter crops, after having organized this work in a fine manner. A creative approach is typical of the work being performed by the grain growers in Bokovskiy Rayon, where the winter crop seed has already been placed in the soil on the entire area. Here, commencing with their very first day of use, the sowing units were operated in two shifts as elements of complex sowing brigades. The oblast's kolkhoz and sovkhoz fields stretch out for 1,000 kilometers in a north to south direction. Naturally, favorable conditions for sowing the winter crops were not available in all areas during the optimum periods for carrying out this work. In a number of rayons, the moisture in the soil was inadequate. This increased the danger of the seed perishing and it also raised the possibility of sparse seedlings appearing. Relying upon accumulated experience and following the example of leading workers, many specialists in Tselinskiy, Yegorlykskiy, Dubovskiy, Myasnikovskiy Rayons began to dry out their excessively damp fields artificially by means of repeated cultivation and harrowing and thereafter they planted their seed in dry earth, but only after having increased the sowing norm somewhat and having decreased the placement depth. A preference was shown for the criss-cross sowing method, with use being made of all available stubble field sowing machines. It would seem that there is no obstacle to carrying out the work in an efficient and creative manner and yet the farms in Orlovskiy Rayon sowed considerably less than the farms in Remontnenskiy Rayon despite the fact that they operated under the same conditions. Meanwhile, a difference which develops during just one day's time takes its toll. Any mistakes made in the autumn out on the grain fields are indeed very costly. Thus they cannot be tolerated. [By I. Fedotkin] [Excerpts] [Moscow SEL'SKAYA ZHIZN' in Russian 29 Sep 81 p 1] 7026

HIGH QUALITY SEED--Krasnodar--The farms in the central zone of the Kuban' -- the chief suppliers of commodity grain -- have commenced sowing their winter crops. High quality seed is being placed in the soil together with mineral fertilizer. Extensive use is being made of wide-cut and multiple-unit assemblies. All equipment is being operated in two shifts. The kray's winter crops will be grown on an area of almost 2 million hectares. [Text] [Moscow TRUD in Russian 6 Oct 81 p 1] 7026

INTERFARM TRACTOR BRIGADES--Nikolayev--The creation of interfarm tractor brigades has improved the use of powerful items of equipment for the carrying out of autumn plowing work in Nikolayevskaya Oblast. One such subunit, which includes seven K-700 machines, is operating on fields in Pervomayskiy Rayon. Each crew is fulfilling 3-4 shift norms. A mobile workshop is ensuring reliable work by the brigade. A mechanized team of raysel'khozkhimiya that has been assigned to it is applying organic and mineral fertilizers prior to plowing. The productivity of the powerful tractors is raised by a factor of 1.5-2 in the enlarged subunits. [Text] [Moscow GUDOK in Russian 23 Oct 81 p 1] 7026

PLOWING COMPLEXES IN OPERATION--Krasnodar--Plowing complexes are preparing the soil for the future harvest on fields in the Kuban'. Autumn plowing has already been carried out on almost 1 million hectares -- one half of the area requiring this work. In those areas frequented by dry winds, the machine operators are employing non-mouldboard tilling of the land with the aid of sweeps. The stubble which remains serves as a barrier against strong winds, it retains the moisture in the soil and it protects the fertile layer of soil from being blown away. [Text] [Moscow GUDOK in Russian 23 Oct 81 p 1] 7026

PLOWING OF FALLOW--Ul'yanovsk, 9 Oct--This year the field workers are devoting special attention to preparing the soil for their spring crops. Autumn plowing has been carried out during the best periods on 1.33 million hectares. The rumbling of the tractors continues. The plowing up of bare fallow is being carried out successfully. The machine operators in Ul'yanovskiy Rayon were the first to complete their task. [By P. Grigorenko] [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 10 Oct 81 p 1] 7026

CHULPAN WINTER RYE VARIETY--Arkhangel'sk--The last tractors and sowing machines have departed the oblast's winter crop fields. This year, for the first time, the Arkhangel'sk grain growers planted the highly productive Chulpan winter rye variety over large areas following clean fallow. It furnishes 50 quintals of grain per hectare. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 23 Sep 81 p 1] 7026

WINTER CROPS INSPECTED--Yoshkar-Ola, 20 Oct--An inspection of winter crop sowings at kolkhozes and sovkhozes throughout the autonomous republic has been completed. The results are gratifying. For the most part, the winter crops were planted during the best periods. The sowing plan was over-fulfilled by almost 11 percent. The overall evaluation of the condition of the winter crops -- 4.3 points. At the present time, the grain growers in the autonomous republic are applying mineral fertilizer to their crops in an organized manner. One fourth of them have already been supplied with additional nourishment. The pilots of agricultural aviation are providing assistance to the rural workers. [By P. Toyshev] [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 21 Oct 81 p 1] 7026

AUTUMN PLOWING RATES--Orenburg, 12 Oct--The machine operators of a brigade having 16 Kirovets tractors, at the Oktyabr'skiy Sovkhoz, are carrying out autumn plowing on up to 550-600 hectares daily. Similar brigades are presently operating on many farms in Orenburgskaya Oblast. This has made it possible to raise the daily increase in plowed land throughout the oblast to an average of 140,000 hectares. Many rayons, in particular Abdulinskiy and Severnyy Rayons, have already fulfilled their autumn plowing plans. [By I. Gavrilenko] [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 13 Oct 81 p 1] 7026

SUCCESSFUL GRAIN HARVEST--Yoshkar-Ola--In all, 2 weeks were required by the farmers in Zvenigovskiy Rayon in the Mariyskaya ASSR in order to harvest completely their grain crops. They were the first in the republic to complete their harvest work. Success was achieved mainly owing to use of the watch work method out on the fields and the expertise displayed by the machine operators. The grain harvest is coming to an end. The crops have been harvested from 90 percent of the areas. Sowing operations and autumn plowing work are being carried out simultaneously and the stacking of straw is nearing completion. The winter crop areas have been expanded considerably and increased to 160,000 hectares. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 25 Aug 81 p 1] 7026

KURGANSKAYA OBLAST RYE SOWINGS--Kurgan--The oblast's farmers have decided to expand their winter crop fields by one third. The above-plan sowing of rye has commenced. The most fertile fallow land has been set aside for use as seed tracts. In order to raise the cropping power of a hectare of rye, the Kurgan grain growers will employ promising regionalized varieties. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 25 Aug 81 p 1] 7026

WINTER RYE PREFERRED--Bryansk--The oblast's farmers have commenced sowing their winter crops, with 380,000 hectares being set aside for this purpose. This is considerably more than last year. In expanding their winter crop fields, the farms are displaying a preference for winter rye. It will be planted on almost two thirds of the area. The sowing is being carried out using high quality seed. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 25 Aug 81 p 1] 7026

SOIL PREPARATION WORK--Kurgan, 17 Oct--The farmers in the Trans-Urals region are performing shock work in honor of the Great October holiday. Many farms have completed their soil preparation work in behalf of next year's harvest and they are presently leveling off their fields and applying fertilizers. One half of the autumn plowed fields have already been leveled off in Belozerskiy and Mokrousovskiy Rayons. This work is being carried out on an extensive scale by the machine operators in Makushinskiy, Shatrovskiy, Safakulevskiy and other rayons. Taking advantage of the fine warm days, the agricultural workers are grading their seed and bringing it to a high sowing condition. [By I. Shevchenko] [Moscow SEL'SKAYA ZHIZN' in Russian 18 Oct 81 p 1] 7026

AUTUMN PLOWING COMPLETED--Lipetsk, 12 Sep--The machine operators in Gryazinskiy Rayon were the first among the oblast's kolkhozes and sovkhozes to complete their autumn plowing on an area of 46,000 hectares. They created composite interfarm brigades and equipped them with powerful tractors, mobile repair workshops and radio-equipped operational vehicles. [Excerpt] [Moscow SEL'SKAYA ZHIZN' in Russian 13 Sep 81 p 2] 7026

CSO: 1824/076

LIVESTOCK FEED PROCUREMENT

LIVESTOCK FEED OPERATIONS REVIEWED

Progress, Resources Discussed

Moscow SEL'SKAYA ZHIZN' in Russian 4 Nov 81 p 1

/Article: "Animal Husbandry Is a Shock Front"/

/Excerpts/ The initiators of the all-Union competition--livestock breeders in Cherkasskaya Oblast--are fulfilling their obligations honorably. The sale of livestock and poultry increased in ten Union republics and of milk, in nine. However, we must not rest on our laurels. We must critically evaluate what has been done and uncover unutilized potentials.

The possibilities are great. As yet methods of animal husbandry intensification have not been adopted everywhere. For example, whereas on Estonia's farms during three quarters 2,820 kg of milk per cow were obtained and large-horned cattle of an average weight of 437 kg was sent for slaughtering, in Georgia the average milk yield was only 1,357 kg and the delivery weight, 252 kg. In Kaluzhskaya, Orlovskaya and Orenburgskaya Oblasts the weight gain of hogs is two-thirds to one-half of that in Vologodskaya, Vladimirskaya, Permskaya and Omskaya Oblasts. Milk yields of cows in Ivanovskaya, Kalininskaya and Tambovskaya Oblasts, wool clips in Penzenskaya and Chitinskaya Oblasts and the egg production of poultry on farms and at poultry factories in Tambovskaya and Astrakhanskaya Oblasts are low.

In most cases the reason for the lag is one--unsatisfactory feeding of animals. However, various factors led to this situation. To take every step to most rapidly eliminate the shortcomings with a view to attaining a breakthrough in work in the very near future is a task of paramount importance.

Livestock breeders in Kalmykia manifested a good initiative. Although the specific feed reserve there is one of the richest in the Russian Federation, the attitude toward it is most careful. For example, the personnel of the Polynnyy Sovkhoz decided to save no less than 4,500 tons of hay in winter. The workers of the dairy farm of the 50 Let Oktyabrya Kolkhoz in Tetyushskiy Rayon, the Tatar ASSR, will reduce the expenditure of grain concentrates by 22 percent. Of course, this does not mean that livestock will be underfed there. There are other ways of economizing. A careful preparation of feed, protection of fodder against damage from grazing and misappropriation and an efficient feeding with due regard for the needs of every group of animals make it possible to improve its utilization and to obtain more output with lower expenditures. For example, livestock breeders in Stryyskiy Rayon, L'vovskaya Oblast, having mastered a low concentrate type of feeding, increased the weight gain of livestock, bringing its average delivery weight up to 380 kg, and greatly overfulfilled the meat sale plan.

Rural workers in the Kuban also show an example of a careful utilization of feed resources. In the kray waste free technology is introduced everywhere and 1,700 feed shops process almost all coarse and succulent feed into high-grade mixtures. A method of obtaining fodder yeast from winter straw has been developed and enterprises ensuring an overall utilization of dairy production waste have been put into operation. It is not accidental that Krasnodar livestock breeders increased the weight gain of large-horned cattle and hogs 1.5-fold or doubled it.

On Ukrainian farms there are more than 20,000 feed shops and kitchens. They are utilized with a great yield and creativity in Krymskaya and a number of other oblasts. But in Sumskaya Oblast at the beginning of the stabling period almost 25 percent of the key projects were inoperative. Many feed shops and kitchens were idle in the Mordovskaya ASSR in October. Only 370 out of 1,161 shops were put into operation in Saratovskaya Oblast. The great effect of thermochemical straw treatment is well known. But in Ul'yanovskaya Oblast only 16 out of the 112 planned trenches designed for this were put into operation on schedule. Such a promising method as hydrobarothermal treatment of raw plant materials is also introduced slowly.

The personnel of patronage enterprises are called upon to provide considerable assistance in the construction, installation and adjustment of feed storage facilities and shops to rural areas. A competition initiated by agricultural workers in Privolzhskiy, Syzranskiy and Shigonskiy Rayons widely spread in Kuybyshevskaya Oblast. The personnel of patronage organizations and enterprises in the cities of Syzran' and Oktyabr'sk by joint efforts decided to repair all livestock projects and to adjust farm equipment. As a result, the preparation for winter was completed on time on most farms in the oblast. But another picture is observed in Rostovskaya Oblast. By the middle of October the personnel of Glavsevkavstroy, Volgodonskenergostroy and Donpishchepromstroy fulfilled the annual assignments only 14 to 18 percent. The construction of feed production projects is carried out in an especially inefficient way.

Bryansk Area Shortcomings

Moscow SEL'SKAYA ZHIZN' in Russian 10 Nov 81 p 1

/Article by G. Krasnoperov, Bryanskaya Oblast: "To Increase the Yield of Fodder"/

/Excerpts/ More than 1,000 feed shops have been built on the oblast's kolkhozes and sovkhozes in the last few years. All of them are fitted with the necessary equipment. However, they do not at all operate as they should on all farms. For example, only 13 out of 17 feed shops operate in Karachevskiy Rayon. The Druzhba Kolkhoz, the Kolkhoz imeni M. Gor'kiy, the Kolkhoz imeni Kalinin and the Znamya Sovkhoz are slow in commissioning these projects. The yeasting, steaming and chemical treatment of fodder have not been organized on many farms in the rayon.

The Rodina Kolkhoz and the Znamya Sovkhoz are among the lagging ones. Inefficient preparations were made there for the beginning of wintering. Nor did the personnel of these farms cope with the feed procurement plan. Feed shops, which make it possible to attain a greater yield of fodder with its lower expenditures, are inoperative.

In Karachevskiy Rayon there is a wealth of experience in feed processing before it is given to animals, experience accumulated by the workers of the Kolkhoz imeni Zhdanov. There the entire fodder passes through feed shops. The highly nutritive full-ration mixtures help to increase the productivity of animals and to lower the expenditure of concentrates. According to the results of the all-Union competition for a successful wintering of livestock and increase in the production and purchases of livestock products during the winter period of 1980-81 the kolkhoz was awarded the Certificate of Honor of the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU and the Central Committee of the Komsomol. Unfortunately, the experience of this advanced collective has not been popularized widely.

It is well known that the lack of common salt in the ration of cows causes a loss of appetite and lowers the assimilability of feed. However, on kolkhozes and sovkhozes in Vygonichskiy, Karachevskiy, Pochepskiy and other rayons people's controllers have uncovered numerous cases in which cows are not given common salt. Often animals do not receive other irreplaceable mineral additives. Why? Farm managers and specialists complain about the oblast Sel'khozkhimiya Association, saying that it disrupts the delivery of these important substances. However, in the warehouses of the Sel'khozkhimiya Association by the middle of October there were about 1,500 tons of common salt, 1,735 tons of fodder chalk, hundreds of tons of nitrogen, phosphorus and other additives. Many of these reserves are intended precisely for farms in Karachevskiy, Vygonichskiy and Pochepskiy Rayons. It appears that no one has bothered to deliver these additives to farms.

The oblast's advanced farms try to increase the protein content of the ration of large-horned cattle, introducing concentrated supernitrogen additives of the xaid type.

October has ended. But even during these days, when advanced farms have been feeding livestock according to winter rations for a month, processing and flavoring fodder, as before, feed shops are closed on many other kolkhozes and sovkhozes. The ease with which some managers and specialists break technological discipline is surprising. Even the most serious official warnings have no effect on them. The decree of the Bryanskiy Rayon Party Committee and the rayon executive committee on the course of a mutual check of livestock wintering in the rayon set the task of putting all the feed shops existing on farms into operation on schedule before 25 October. This directive has not been fulfilled. More than 30 feed shops were inoperative after 25 October. Only one-fifth of them were put into operation in the same Karachevskiy Rayon. Many feed shops are not utilized in Kletnyanskiy, Surazhskiy and Brasovskiy Rayons. Throughout the oblast to this day fodder is fed in unprepared form on more than 500 large-horned cattle farms and on many hogs farms.

RSFSR Feed Shops Evaluated

Moscow SOVETSKAYA ROSSIYA in Russian 26 Sep 81 p 1

/Article by raiding brigade: A. Bochkarev, L. Gladysheva, B. Lazarev, N. Kon'kov, A. Usol'tsev, E. Fedorova and I. Filimonov, Kuybyshev, Ivanovo, Novgorod, Novosibirsk, Izhevsk, Moscow, Maykop: "The Commissioning Was Set, But..."/

> /Excerpts/ There are many thousands of feed plants, shops and kitchens in the republic. Not a single kilogram of straw, chaff or tops should enter animal feeders, bypassing this most important section. After all, the nutritiousness and assimilability of fodder are doubled and tripled there by means of thermal and chemical treatment.
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> How did farms repair and begin to operate shops and kitchens? By what methods is fodder processed? Our correspondents visited sovkhozes, kolkhozes and Sel'khoztekhnika associations.

Both in Summer and Winter

In the administration of agriculture of the Adygeyskaya Oblast Executive Committee we were acquainted with the following statistics: Ninety percent of the 112 feed shops and kitchens are in good working order. We were interested in finding out whether all of them operated and we went to Giaginskiy Rayon.

Locks hung on the doors of feed shops on the Oktybar' Kolkhoz and on the Kolkhoz imeni Lenin. Meanwhile, these farms have the lowest indicators of milk yield in the rayon. But there is positive experience nearby--on the Rossiya Kolkhoz. On this kolkhoz there are more than 2,000 head of large-horned cattle and all the animals are fattened and well-formed--it is a pleasure to look at them.

"The whole secret lies in feeding," A. I. Kharitonov, zootechnician of the dairy farm, shares his experience. "Both in winter and summer we serve feed only in prepared form. We try to vary the 'menu' for the herd. As long as there is green fodder, we prepare 40 tons of feed mixtures per day. During the winter period feed production increases to 100 tons."

For the 4th year weather conditions have not enabled farms in the autonomous oblast to prepare a sufficient amount of green fodder. Nevertheless, the oblast's livestock breeders do not permit the dumping of livestock and have preserved the breeding herd, young stock and level of productivity. The service of feed shops is indisputable here.

A reliable reserve of chaff and straw has already been created for the forthcoming wintering period. Fodder has been brought to feed shops. The harvesting of industrial crops has begun in the oblast. A total of 25,000 tons of sugar beet tops and 13,000 tons of sunflower heads and stems are to be gathered during the "second harvest." Part of this fodder will be stored together with corn and the rest will go to feed shops.

Who Is Later?

G. B. Ivanova, chief zootechnician of the Rodina Kolkhoz in Zav'yalovskiy Rayon, the Udmurtskaya ASSR, impatiently waits for the beginning of October. Feed shops begin to operate at this time. They should "raise" milk yields. Why does the kolkhoz wait for the "official" start of the wintering period and in the meantime output is lost? After all, according to the reports, feed preparing equipment on the kolkhoz is considered serviceable and can operate now. However, when we visited brigades, we saw a picture that was far from satisfactory. Judging from everything, repairmen did not look into the Kenskiy feed shop since the last wintering period. During the summer the unit became rusty and belts disappeared from electric engines. The straw grinder was buried under a heap of iron. Equipment in the central brigade has the same appearance.

Three installations for thermochemical treatment of straw on the Svoboda Kolkhoz in the same Zav'yalovskiy Rayon are far from ready for operation. The local Sel'khoztekhnika Association took upon itself the concern for the preparation of feed shops there. It concluded a contract with the kolkhoz for an overall servicing of mechanisms. How the association helps the farm can be seen from the Ozhpurginskaya Farm. There the brigade of repairmen has already "completed" its work. V. N. Akilov, brigade leader on the kolkhoz, suggested that we look at the result.

"They welded a small seam, put two new connecting pipes on the drums and that's all! Belts for motors are needed. They say: The association does not have them. The bearings of guide rollers need to be replaced--they are not available either. So, if we ourselves find these parts somehow, then we will connect the installation..."

The practice of repairing feed shops at the last moment places many farms in Udmurtia in a bad position. Almost in all 25 rayons the productivity of the milch herd dropped with the onset of fall. Livestock breeders are unable to rectify the situation by means of feed shops. Almost on every third farm equipment is not ready. This is according to reports. And how many installations are considered serviceable, but cannot operate [illegible]?

The Ministry of Agriculture of the autonomous republic puts the blame on Sel'khoztekhnika--it did not provide the necessary reserve of spare parts. In turn, Sel'khoztekhnika points to the lack of organization of the farms themselves and to the lack of commitment of Udmurtia's industrial enterprises, which promised, as patronage help, to manufacture several dozens of drums and other especially scarce units, but never made even one part.

One-third of the mechanized feed shops were idle in Novgorodskaya Oblast at the beginning of December last winter. How have these errors been taken into consideration and corrected now? There are 200 milch cows on the Sergovskaya Farm on the Iskra Kolkhoz in Novgorodskiy Rayon. We talked to M. A. Isakov, leader of the overall brigade.

"Everything is in order in our shop."

We must admit that we did not feel such confidence when we examined the shop. The units and parts of mechanisms were in a thick cobweb, rotten remains of ground feed were in the grooves of conveyers and dirt and puddles were on the floor.

It is hardly possible to consider such feed shops "in working order." The situation with feed kitchens is not better in Novgorodskaya Oblast. A total of 39 out of 132 kitchens have not been fixed and are in need of repair.

People are complacent, postpone the commissioning of equipment and overstate figures in reports not only in the above-mentioned oblasts. Sel'khoztekhnika in Ivanovskaya Oblast oustripped everyone in this respect. A total of 337 out of 342 feed shops and kitchens are in good working order and 315 already operate. An operational staff for the preparation of livestock farms for wintering has been established and actively works in the association. This is the situation according to the information given by V. K. Satirskiy, chairman of the association. In reality, only one-half of the feed preparing equipment operates in the oblast. The conditions of the very important competition of line-installation sections and stations for the servicing of farms and complexes are totally removed from reality. People are urged to ensure the readiness of equipment for 1 November. It turns out that the competition is carried out under the slogan "Who Is Later?".

Operational Measures Are Needed

The lack of the necessary parts, units and materials is among the reasons for the postponement of the completion of the repair and commissioning of feed shops and kitchens. For example, farms in Novgorodskaya Oblast are acutely short of water and gas pipes and lack electrodes for welding operations. A total of 35 tons of electrodes are annually allocated from the oblast's stock, but the need for them is three times as high. The situation with spare parts for the S-12 mixers is unsatisfactory. It turns out that it is simpler to buy a new mixer than, for example, reducer gear for it, which mostly break down. Therefore, every farm must be "ingenious" in its own way. For example, on the Ruch'i Sovkhoz one S-12 and two S-7 mixers were bought and stored exclusively for spare parts. Is this not too wasteful?

Rural workers have many complaints against planners of farms and complexes and designers and developers of feed preparing equipment. These complaints, in particular with respect to the development of standard production lines, were often communicated to the RSFSR Ministry of Agriculture and to the Ministry of Machine Building for Animal Husbandry and Fodder Production, but, as before, livestock breeders must count more on their own local experts.

A great deal also depends on personnel. People with specialized training work in feed shops very rarely. It is also a question of a lack of organized training of such workers and often of a careless approach to the selection of specialists and an underestimate of this work.

The complicated conditions of the forthcoming wintering period obligate economic managers, livestock breeders, machine operators and patronage enterprises to take the most operational measures and to organize an efficiently operating chain, that is, feed storage facility-shop-farm. The raid has shown that, in practice, thousands of shops and kitchens are still idle and this results in losses of many tons of milk and meat.

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LIVESTOCK FEED PROCUREMENT

UDC 636.085

GREATER UTILIZATION OF ALL LIVESTOCK FEED RESOURCES URGED

Moscow VESTNIK SEL'SKOKHOZYAYSTVENNOY NAUKI in Russian No 10, Oct 81 pp 9-17

[Article by VASKhNIL Academician L.K. Ernst: "Use of All Feed Reserves"]

[Text] One of the most vital problems in agriculture is that of increasing the production and improving the quality of the principal products of animal husbandry. Our country is one of the world's leaders in terms of the number of principal types of agricultural animals. Through the joint actions of scientific and practical workers, a rather high genetic potential productivity for all types of animals and poultry has been accumulated. Within the branch, especially in poultry raising and pig farming, more and more enterprises are operating on the basis of industrial technologies. Modern animal husbandry has been modernized considerably. Skilled personnel are working at all levels of production and science. All of this has brought about a considerable increase in the production of the principal products of animal husbandry. During the 1965-1980 period, meat production in dressed weight increased from 10.0 million tons to 15.1 million tons -- to 151 percent, milk increased from 72.6 to 90.7 million tons -- to 125 percent, eggs increased from 29.1 billion to 67.7 billion units -- to 232 percent and wool increased from 357,000 to 462,000 tons -- to 129.4 percent. The increase in animal husbandry output reveals that the branch has all of the objective opportunities required for rapid growth.

However, one bottleneck continues to be that of the feeding factor, which encompasses the entire complex devoted to feed production and the storage and processing of feed. This makes the branch vulnerable during years marked by unfavorable weather conditions. Meanwhile, it must be acknowledged that unfavorable weather conditions occur rather often and exert a substantial adverse effect on the development of animal husbandry. Thus, during years which followed low grain production years, the number of swine decreased as follows: in 1968 and compared to 1967 -- by 7.1 million head or by 12.2 percent, in 1976 -- by 14.4 million head or by 20 percent. Approximately 2-3 years were required in order to restore the herd. A reduction in the number of animals is accompanied by a decrease in the production of animal husbandry products, especially in those zones which suffer the most from unfavorable weather conditions.

Under these conditions, a special purpose system of measures must be developed and implemented for countering the adverse effects generated by unfavorable weather upon the production of animal husbandry products.

Natural lands, the area of which is in excess of 320 million hectares, constitute a most important reserve for increasing the production of feed. Science has developed effective methods for improving these lands and they have been introduced into production operations. However, in recent years less use has been made of the meadows and pastures. In 1969, in the nonchernozem zone of the RSFSR, hay was procured from only 61 percent of the haying land, in Kirovskaya Oblast -- from 30 percent and in Permskaya Oblast -- from 26 percent of this land. Even in the northwest and in other regions of the zone having rich haying lands at their disposal, lands which have been used traditionally for cattle feed purposes, the procurement of grasses for hay has been curtailed, thus revealing a wasteful attitude towards this rich natural resource. Here there are objective reasons for this: a reduction in the rural population, a decrease in the number of privately owned livestock and the absence of complex harvesting equipment.

Meanwhile, as long as 40 years ago these lands constituted the foundation of the feed base for cattle and sheep husbandry. A sharp change is required in the attitude towards the use of natural feed lands. Indeed, even if the average nutrient yield per hectare is considered to be a minimum of 3 quintals of feed units, then these areas should be able to produce an annual yield of 200 million tons of hay. Full use must be made of these reserves. During years marked by favorable weather conditions in the country's nonchernozem zone, it is possible to obtain no less than two and in some areas, where irrigation has been installed, three cuttings of sown grasses, or 50-60 quintals of feed units per hectare.

The farms must make extensive use of intermediate, post-haying and post-harvest sowings. The scientific institutes in all zones of the country have developed plans for alternating these sowings and the agricultural practices involved. Thus the Scientific Research Institute of Farming and Animal Husbandry in the Western Regions of the UkSSR has proposed and approved the following plan: winter rape, which furnishes 250-260 quintals of fodder per hectare, a mixture of corn with peas -- 280-300 quintals per hectare and a post-harvest mixture of white mustard with peas -- 150-180 quintals per hectare. In all, the sowing of these crops will produce a yield of 680-740 quintals of fodder per hectare, with an overall feed value of 100-110 quintals of feed units per hectare.

In the nonchernozem zone, fine post-haying crops include turnips and field kale, pricked-out seedlings, or a sowing of vetch, or peas and oats or vetch-peas-sunflower mixtures. White mustard and Chinese radishes are considered to be promising crops. During a 35-40 day growing season and assuming good fertilization, they produce 400 quintals of fodder per hectare. Moreover, they are able to withstand cold weather down to a temperature of minus 6-8^{o} and this extends the green production line to late autumn. These crops can be cultivated even in the Far North. Thus, at the Sysol'skiy Sovkhoz in the Komi ASSR, Chinese radishes produced a yield of 400-450 quintals of fodder per hectare 33-40 days following the appearance of the seedlings. Nevertheless, despite the obvious effectiveness of such sowings, they have been introduced into operations in relatively small amounts.

Special importance is attached to a complex of problems associated with the moderately concentrated feeding of large-horned cattle and sheep. Over a period of a number of years, a type of feeding has developed for large-horned cattle which is based upon a large consumption of concentrated grain feed. The disproportion in the production of grain and bulky feed -- coarse and succulent -- is becoming greater. Thus, from 1965 to 1978 grain production increased by 94 percent, haylage and silage -- by 60.2, straw -- by 28 and the most important and most valuable coarse feed -- hay -- even decreased by 5 percent. From 1965 to 1977 the consumption of concentrates increased twofold per quintal of milk, from 0.2 to 0.4 quintals, and per quintal of beef -- by a factor of 2.2, from 1.3 to 2.8 quintals. During the past few years, this trend has not changed and the average expenditure of concentrates for the production of 1 quintal of milk has remained high -- 0.4 quintals of grain feed per quintal of increase in the weight of large-horned cattle. In a number of republics and oblasts, the amount of concentrated feed required for the production of 1 quintal of milk has been even greater -- in the KaSSR and ESSR -- 0.5 quintals and in the UzSSR and TuSSR -- 0.6 quintals. During the 1975-1979 period, the expenditure of grain for feed purposes, for all types of livestock and poultry, increased by a factor of 1.27, including mixed feed -- by a factor of 1.5. The procurements of coarse and succulent feed during these years continued to lag behind: silage production increased by only a factor of 1.2, haylage -- 1.19, green feed -- 1.12, root crops -- 1.08 and straw and hay -- by a factor of 1.02, with the consumption of pasture feed even decreasing by 6.1 percent.

The scientific institutes have developed standard rations and norms for the feeding of ruminant animals, which make it possible to saturate the rations with coarse and succulent feed to the maximum possible degree and to ensure a high productivity with thrifty expenditure of the grain. The information used for publicizing this system should be disseminated more actively using all possible resources.

In order to achieve a sharp increase in the production of milk, beef, mutton and wool, while economizing in the consumption of grain, a considerable increase must be attained in the production of coarse, succulent and green feeds. A requirement exists for a state all-purpose program for increasing the production of coarse and succulent feeds, one which includes an increase in the cropping power of the forage crops, the mechanized harvesting and processing of the feeds and proper storage for them.

But today we must concern ourselves first of all with more thrifty expenditure of grain for feed purposes. And here the chief reserve is that of introducing into operations moderate and low-concentrate rations for the ruminant animals. However, in addition to a substantial increase in the production of coarse and succulent feeds, this system also calls for an improvement in their quality and a sharp reduction in nutrient losses during storage. Maximum use must be made of construction resources for the erection first of all of storehouses for silage, haylage and hay.

For a number of years now the scientific collectives have been developing feed preservation systems and effective preservatives have been recommended (formic and benzoic acids, sodium pyrosulphite and others), which sharply reduce the nutrient losses in silage. However the production of preservatives by the chemical industry, in the volumes required, has not been organized. And indeed we are speaking here of the annual preservation of more than 10-12 million tons of feed units, which is roughly equivalent to the same amount of grain.

The scientific institutes must exercise control over the introduction of chemical feed preservation into operations and ensure intelligent use of the preservatives, especially in those areas where they are being employed for the very first time.

The waste products of field crop husbandry have always been an important component in the ration for large-horned cattle and sheep. It is precisely these branches of animal husbandry that can make field crop husbandry free of waste products. At the same time, by no means are the secondary products of field crop husbandry being utilized either conpletely or in a rational manner at all times. More than 200 million tons of straw form annually throughout the country and yet no more than 30-40 percent is used for feed purposes. Thus, more than 100 million tons of straw are not being processed into animal husbandry products annually.

The scientific institutes both in our country and abroad have developed a number of effective methods for processing straw, which raise its food value substantially (alkali treatment, hydrobarothermal method, liquid ammonia treatment, fermentation methods, granulation with additives). However, they are being introduced into operations very slowly and in completely inadequate volumes. A system of measures is required which will make it possible, within the next 2-3 years, to process and deliver to animal husbandry all of the straw being produced in the country. This will increase feed production by at least 40-50 million tons of feed units and produce a considerable economy in the consumption of grain in cattle and sheep husbandry.

During the 1981/82 winter, all straw must be made available for feed purposes and use must be made of all of the straw treatment methods recommended by science. A considerable portion of this feed will be processed using simple methods; straw should be used extensively during ensiling work. At the same time, more active work should be carried out in connection with the construction of shops for more intense processing of straw, especially in the grain regions of the country.

The scientific institutes for animal husbandry and feed production must rapidly acquaint a wide circle of leaders and specialists and all animal husbandry workers with the most rational straw processing methods, with emphasis being placed upon their use this year. In short, everything must be done to ensure that complete use is made in animal husbandry of straw and other waste products of field crop husbandry.

The harvesting of technical crops, vegetables and melon crops produces large quantities of waste products in the form of plant bulk. In turn, this bulk, when correctly processed and preserved, can produce many millions of tons of good feed. The tops of sugar and table beets, food roots, carrots and cabbage leaves are of the greatest value. The tops should ideally be subjected to artificial drying. The dry flour prepared from beet tops contains 15-17 percent protein, approximately 50 percent nitrogen-free extractive substances and 110-150 milligrams of carotene. The coefficients of digestibility for the principal nutrients of this feed are 70-76 percent. Artificially dried haulm is a concentrated feed which can be used to replace a portion of the grain concentrates in the rations for fattened young large-horned cattle and cows.

Beet tops, food roots and cabbage leaves ensile very well. The quality of silage is improved when 10 percent dry crushed straw is added to the silage bulk.

Artificially dried sunflower heads are of high feed value for large-horned cattle; the dry substance of such heads contains a large amount of fat --3.5-5.5 percent, phosphorus, calcium, nitrogen-free extractive substances and a small amount of cellulose -- 14-16 percent. The low cellulose content promotes a high digestibility for all of the nutrients. One kilogram of the flour obtained from the heads contains 0.7-0.8 feed units and 60-70 grams of digestible protein. Such flour can also be used for replacing a portion of the grain concentrates in the rations of large-horned cattle. It can also be used for feeding to swine.

More active use must be made of non-traditional sources of feed. One such source -- the feed products obtained from the biomass of the forest. A forest, as is well known, is a most important active part of the biosphere and one of the most productive ecological systems, possessing good resistance against unfavorable weather conditions. Fifty four percent of all organic substances on earth are concentrated in the biomass of a forest. According to official scientifically sound estimates, our unused forest waste products alone amount to 100 million cubic meters annually. Nevertheless, this vast and regularly reproduced source of organic substance is being used for feeding to animals in infinitesimally small amounts and only in the form of ramal feed. But the scientific institutes have already proposed and carried out checks on an entire range of technologies and methods which will make it possible to include processed products of the forest in the feed for animals on a more extensive scale. One such method is the preparation of silage from leafy branches, with the country possessing tremendous resources for producing this feed. Thus, according to data supplied by corresponding member of VASKhNIL [All-Union Academy of Agricultural Sciences imeni V.I. Lenin] N.I. Kazimirov, the overall bulk of wood green materials formed during timber fellings in the nonchernozem zone of the RSFSR alone amounts to 15 million tons annually. At the present time, almost no use is being made of this potential feed.

Work carried out by the Scientific Research Laboratory of Feed Resources of the Forest has revealed that wood bark contains a tremendous amount of valuable organic substance suitable for feeding to ruminant animals. The timber processing industry turns away many tons of such bark in the form of waste products. Feed mixtures containing a large percentage of bark have already undergone extensive testing. The high food value of this feed has been confirmed.

The country's cellulose-paper industry has at its disposal tremendous reserves of new and highly nutritious feed resources. The utilized waste products (technological water) obtained during the production of fibreboard panels can serve as a substantial source for valuable feed. Wood fibre is undergoing testing as an additive in the feed for ruminant animals. Work has been carried out on a technology for producing feed sugar (wood molasses), obtained during the complete hydrolysis of wood at enterprises of Glavmikrobioprom. In terms of its feed properties, wood molasses is not inferior to the usual beet molasses and the mass production of this new feed will provide a tremendous source for supplementing the resources and improving the quality of the feed for animals. Such an approach with regard to the non-traditional sources of sugar will make it possible, to a limited degree, to solve the protein deficit problem. Thus, when including molasses in the feed for ruminant animals, an opportunity will be presented for substituting non-protein nitrogen-free compounds for up to 30 percent of the protein.

However, active participation is required on the part of the branches of industry if these resources are to be included for use in the near future.

A most important factor for more efficient and economic grain consumption -- the production of balanced mixed feeds. Many mixed feed recipes have been created and approved for almost all types and groups of animals without exception. Many of the mixed feeds meet international standards. All of this, beyond any doubt, is the result of work performed by researchers. However, a large portion of the output of the mixed feed industry consists of very simple grain mixtures, while animal husbandry requires mixed feed which is balanced in terms of the more important components, without which high and economically profitable animal productivity would be impossible.

The mixed feed industry can fulfill its task only if it is supplied with the required ingredients -- protein, amino acids, mineral substances, vitamins and the means for preventing losses in mixed feed quality during transport and storage. During the 1977-1978 period, the requirements of the state mixed feed industry were satisfied for only 11 out of 24 preparations of biologically active substances. Only 63-72 percent of the required amount of Vitamin A was obtained, Vitamin E -- 26-28 percent, choline-chloride -- 15-17 percent, manganese -- 44-67 percent and lysine -- only 0.9-1.0 percent. If the amount of biologically active substances supplied to the mixed feed industry is compared against the overall animal husbandry requirements, then the situation becomes even more aggravated owing to the fact that during the past 2 years the requirements of the interfarm mixed feed industry for Vitamin A have been satisfied by only 25-14 percent, B_2 -- less than 21 percent, manganese -- less than 3 percent and so forth.

As a result, each year the mixed feed alone for poultry and for state industrial complexes, mainly swine raising complexes and partially for young stock, is enriched with biologically active substances. The remaining livestock are given mixed feed and mixtures which are not fully balanced in terms of biologically active substances and the effectiveness of such mixed feed is extremely low. It would be unrealistic not to mention the slow satisfaction of all of the branch's requirements for Vitamin A, lysine and other complex preparations. But animal husbandry is not being supplied annually with the required amounts of common salt, phosphorus-calcium additives and many microelements, the production of which has been well organized and does not constitute a problem. A deficit of these components in a ration increases the nutritional imbalance, lowers productivity and brings about an increase in feed consumption. During the 1981/82 winter, when it will not be possible to achieve an optimum arrangement in terms of a number of nutrients, special importance will be attached to balancing the ration in terms of mineral substances.

The scientific institutes have developed recommendations for the mineral nourishment of all types of animals and the means is available for balancing the rations in terms of the principal macro and microelements. The chemical industry must immediately accept the order of animal husbandry and, taking into account the annual feed conditions, produce the required amount of mineral additives.

In the feeding of livestock, even during years considered to be relatively favorable in terms of feed conditions, a substantial protein deficit is experienced.

This winter's indoor maintenance period will also be tense and, as a result, it will be necessary to use non-protein nitrogen compounds more extensively in the rations for ruminant animals. In their rations, balanced in terms of overall food value, up to 30 percent of the digestible protein can be replaced by nitrogen containing substances of chemical synthesis. The methods for adding carbamide to a ration are known and have been tested and maximum use should be made of them.

The production of mixed feed containing carbamide, the preparation of carbamide concentrate, carbamide in the formula for complete ration dry and damp mixtures, granulated amide additives based upon pulp residue and straw, feed enrichment during ensiling using nitrogen substances, the addition of carbamide and ammonia liquor to silage and pulp residue prior to feeding, liquid additives containing carbamide and based upon syrup and liquid ammonia treatment of coarse feed -- each farm is entitled to select any one of the above methods, depending upon the specific conditions. The situation must be monitored in a strict manner so as to ensure that the overall amount of synthetic nitrogen substances does not exceed the maximum permissible norms, which in a conversion for carbamide amounts to 120 grams for cows, 60 grams for young large-horned cattle stock more than 6 months of age, 100 grams for large-horned cattle undergoing a fattening regime, 18 grams for adult sheep and goats and 12 grams daily for young sheep and goat stock more than 3 months of age.

When feeding these substances to ruminant animals, the overall energy food value of the ration must be taken into account. If there is a deficit of energy in the rations (15-20 percent lower than the norm), a large proportion of coarse feed and silage and a low amount of readily digestible carbohydrates, the daily norms for carbamide must be lowered by 25-30 percent. If the energy amount is lower (35-40 percent lower than the norm), the addition of carbamide to the ration is not recommended.

Practical workers should be instructed regarding the use of non-protein nitrogen, so as to ensure that its addition to a ration will lower the protein deficit.

A most important means for achieving more thrifty grain consumption not only for large-horned cattle but also for swine is that of creating mixed feed recipes which include considerable amounts of non-grain components. We are already lagging behind in this regard. The scientific institutes have prepared a number of mixed feed recipes in which the proportion of non-grain feeds has been raised. Included among them are dry pulp residue, grass meal and other components. This will reduce the grain requirements not only for feeding to ruminant animals but also to swine.

There is still one very important problem -- increasing the proportion of succulent feed for feeding to swine. The grain and concentrated type of feed that has been used for swine during the past few years has adversely affected the feed base for swine raising at the kolkhozes and sovkhozes. Meanwhile, domestic and foreign researchers have firmly established the fact that the ration for grown and fattened swine can contain up to 30-40 percent succulent and green feed, with high productivity and good quality meat being achieved from such a ratio of components. This type of feeding must be introduced into operations to the maximum possible degree at the swine raising farms of kolkhozes and sovkhozes. It will then become possible to increase pork production considerably with relatively fewer grain expenditures. This problem was developed some time ago at the zootechnical institutes, with fine results being obtained. A technology is available for obtaining mixed silage for swine in various zones throughout the country. Mixed silage for swine must meet the following requirements: the nutritional value of 1 kilogram -- not less than 0.25 feed units, the content of digestible protein -- not lower than 20 grams and carotene -- 20 milligrams and the amount of crude cellulose -- not more than 4-6 percent, taking into account its content in all of the components comprising this feed. The edibility of the mixed silage must be such that it can provide up to 40 percent of the energy food value in the ration for swine -- sows and fattened animals.

In the nonchernozem zone, the chief components for mixed silage can include boiled or green potatoes, carrots, the aftergrowth of leguminous grasses (clover or alfalfa), field kale, hay or grass meal; in the chernozem zone -- sugar or semi-sugar beets, potatoes, corn ears of milky-waxy or waxy ripeness, fodder gourds, watermelons, alfalfa fodder, sugar beets and their tops. The mixed silage for swine includes (according to weight) 60-70 percent root crops, 25-30 percent grass fodder, kale and the tops of vegetable crops and 5-10 percent hay or grass meal. Hay or grass meal are added for the purpose of lowering the moisture content of the mixture, preserving the grass juice and normalizing the ensilage processes.

It is recommended that 15-20 quintals of mixed silage be procured for the principal sow and for animals undergoing fattening -- 6-8 quintals per head (during the fattening period). When feeding it to the animals, the ration should be balanced in terms of mineral substances: 1 feed unit should contain 7 grams of calcium and 6 grams of phosphorus.

Unfortunately, during the past few years the farms have converted over almost completely to the grain type of feeding for swine, despite the fact that a sharp increase in the production of mixed silage and its extensive introduction into the rations for swine are both feasible and necessary. The scientific institutes must acquaint the agricultural workers with the techniques employed in the preparation and utilization of mixed silage.

A great and still insufficiently used source of feed for swine husbandry is that of food scraps. Such scraps are produced by each resident at the rate of 70-80 kilograms annually. The utilization of each ton of food scraps furnishes 40-50 kilograms of pork. Thus, during 1980, 500,000 swine were fattened at sovkhozes in the Moscow region, with food scraps being included in the ration and 18,000 tons of pork were produced. Moreover, as yet only approximately one third of the food scraps of Moscow and the oblast is being made available for feed purposes. Meanwhile a check has been carried out on the practice of many farms with regard to the technology for employing food scraps. At the Krasnyy Luch, Ostankino and Znamya Oktyabrya Sovkhozes, food scraps constitute more than 30 percent of the ration for swine. The Pork Production Complex imeni 50-Letiya SSSR in Kalininskaya Oblast is setting a fine example in the use of this raw material.

The task of collecting these scraps from the population is indeed laborious. But great experience is available in this regard and it must be disseminated rapidly to all of the cities. Food scrap processing must be organized -- their drying, granulation and enrichment with additives. This will make it possible for this feed to be used at large pork production complexes. In short, food scraps represent a substantial source of feed for use in swine husbandry and special measures must be undertaken this year aimed at improving this work.

More economic feed consumption, especially grain concentrates, is impossible in the absence of efficient setting of feeding norms. Scientifically sound feeding norms are available for all types and groups of animals and sound standard rations have been recommended by the zootechnical institutes. The modern industrial technologies call for the group feeding of animals. But during the past few years, on many farms having large concentrations of animals and increased workloads per worker, the system of establishing differentiated norms for feeding has not been followed. Thus, in dairy cattle husbandry, rations containing the same proportion of grain are being given to cows in various stages of lactation and this has led to an overexpenditure of concentrates with no increase in productivity. During the forthcoming wintering period, a requirement will exist for introducing strictly differentiated feeding into operations on all farms and this will produce good results. Importance is being attached at the present time to acquainting the animal husbandrymen with the recommendations for employing differentiated feeding for all of the different technologies being used throughout the country for producing animal husbandry products.

The extreme conditions that prevail in a number of zones throughout the country can only adversely affect the health of animals. Therefore, in addition to utilizing all feed reserves, measures should be undertaken aimed at raising the resistance of the animals, intensifying the prevention of diseases and improving the sanitary quality of the feed. More extensive use must be made of the resources developed by the veterinary science for preventing gastro-intestinal and respiratory diseases among young stock and the requirements of the farms for vaccines and serums must be satisfied completely. Special attention must be given to the timely dehelminthization of animals, especially in regions subject to drought conditions. The zonal institutes of the veterinary science must provide the farms with maximum assistance in protecting their animals and lowering the disease rate.

The impending livestock wintering period requires the mobilization of all reserves. All scientific institutes and subunits associated with feed production, animal husbandry and the veterinary science -- all-union, republic and zonal institutes of animal husbandry, feed production and the veterinary science, the zonal scientific research institutes of agriculture and experimental stations -- must participate actively in organizing feed procurements and carrying out the livestock wintering program.

Recommendations must be issued concerning the principal and vital problems of the times and those methods and systems the use of which during complicated annual conditions could bring about an increase in the production of animal husbandry products must be publicized actively over all information channels. Trips must be organized for the scientists so as to enable them to visit the various areas and furnish practical assistance to the farms, especially in those zones where unfavorable wintering conditions prevail. The scientific institutes, jointly with the agricultural specialists, must prepare plans calling for more complete use of feed resources for each republic, zone, kray and oblast. This will constitute a worthy contribution by workers attached to the agricultural science towards overcoming the difficulties caused by unfavorable weather conditions, a contribution towards raising the stability of agricultural production.

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PROCUREMENT MINISTER ON FLOUR, FEED SITUATION IN ESTONIA

Tallinn RAHVA HAAL in Estonian 13 Oct 81 p 2

[Article by August Pedajas, procurement minister of ESSR: "Of Bread and Butter"]

[Text] No matter where one breakfasts, lunches or dines, be he a kindergarten tot, student or worker, a worker in the educational or cultural field, sailor or driver, scientist or physician, he needs bread and butter to live and work. The material-technical base of the ESSR Ministry of Procurement consists of grain elevators and storage facilities, meal and barley mills, and concentrated feed plants; these have been distributed among the 7 grain products combines of the republic.

Our primary mission is to assure the supply of all kinds of flour, hulled grain, and cereals to the population and the food industry, to provide high-quality feeds to the republic's herds, and to deliver barley malt to the beer industry and grain to distilleries.

We can say that during the last decade our production doubled in monetary terms. We almost doubled the production of mixed feed. In earlier periods the mills produced and marketed only grade I and II wheat flour; better grades had to be imported from the RSFSR, but now the quality flour mills at Tamslau and Keila have been working for years.

Thanks to our industrious millers, mill personnel, electricians, mechanics, and loaders, a constant supply of all kinds of flour, hulled grain, and cereals reaches the population and the bread and pastry enterprises. However, several pressing problems in the flour, hulled grain, and cereal industry must be solved in the current five-year period. We must gradually increase the production of high-grade flour by 8-10 percent in the Tamsalu and Keila quality flour mills so that we no longer need to import that grade of flour. The reconstruction of the Tartu flour mill must be undertaken to fully guarantee the supply of desired quality flour to Tartu and the south-east and south of Estonia. The reconstruction will allow considerable savings in grain and will eliminate the need to produce flour grades not used in our republic but still being milled, so that we are hard pressed to find railway cars to export flour. During the current five-year period we must construct a new barley and oats mill to expand greatly the selection of cereals made from barley and oats. This will be a step forward in improving the nutrition of the population.

Technological progress includes milling technology and production of milling machinery. Our milling specialists must follow that progress and implement improvements in milling flour and barley. In cooperation with the Ministry of Food Industry and the bakery sector of the Central Union of ESSR Consumers' Cooperatives and the Ministry of Road Transport and Road Construction, we have implemented the distribution of bulk flour to bakeries in flour transport trucks. Currently 51 percent of the republic's annual baking flour requirements are distributed in this fashion. Bulk transport saves thousands of rubles each year, since it eliminates the bagging of flour, its transport, its lifting, on- and off-loading in storage, and emptying of the bags. At the same time we have freed many people for other tasks. A perennial unresolved problem is retailing flour and barley in the small containers required by consumer demand. At this time the packing lines are working at only 50 percent capacity due to a lack of paper and plastic for packaging. Perhaps the ESSR Gosplan can alleviate the problem by allocating packing material to insure that the necessary volume of flour and cereals is distributed in small packages to self-service stores.

The concentrated feed industry in the republic was 30 years old last year. The first plant of concentrated feed was established at Valga in 1950 with a planned daily output of 50 tons of mixed feed.

The development of the concentrated feed industry was especially rapid from 1970 to 1980. New plants were built and came on line at Valga, Tamsalu, and Keila with a total output of 1,015 tons of mixed feed a day. We began plant reconstruction. For example, the Valga 2d concentrated feed plant produces 450 tons of mixed feed a day compared to the previous 200 tons. The production of the Tamslau concentrated feed plant has also increased. At this time the first stage of reconstructing the Keila concentrated feed plant is being finished; the production of concentrated feed will then increase to 630 tons a day instead of 500 tons. The major users will be the Ranna sovkhoz with its broiler farm, the Tallinn Exhibit Poultry Farm, and enterprises in Harju and Rapla rayons. Without the development of a state concentrated feed industry, the development of modern poultry-raising in such enterprises as the Tallinn Exhibit Poultry Farm, Podrangu sovkhoz, the broiler farm of Ranna sovkhoz, as well as other enterprises raising poultry would have been impossible. The republic's poultry industry will receive almost 150,000 tons of specially prepared mixed feed from the state concentrated feed plants this year. The Tallinn Exhibit Poultry Farm alone will consume 32,500 tons. The Poultry Farm has each year used the feed received from the state in an effective manner. Valuable concentrated feed can result in decreased costs and increased profits. The results of the broiler factory of Ranna sovkhoz are commendable; there products from the Tallinn factory im. v. Kingissepp as well as of the concentrated feeds from the Keila, Tamsalu, and Valga plants are transformed into broiler meat. Mixed feeds are firmly established in turkey and duck farms and in the Kaarepera quail farm. In recent years demand for mixed feeds for trout and carp farms has sharply increased; these are produced primarily by the Valga Grain Products Combine. This year the republic's meat, poultry, fish, and fur industry will receive almost twice as much concentrated feed as in 1970. About 35,000 tons of protein and vitamin additives are produced and mixed into grain, flour, and grass meals. Thus, balanced concentrated feeds can be produced locally. The Experimental Pork Production Combine of the Exhibit Sovkhoz im. Y. Gagarin uses concentrated feed effectively. The combine is issued 2,500 tons of concentrated feed a year, and this is converted into 5,000 tons of pork (live weight). The daily increase in pig weight has remained in the 500 gram range, with about 5 feed units used to produce 1 kilogram of live weight, including feed for breeding hogs. If all the enterprises of the republic could achieve even nearly as efficient a feed use, the production of pork could be increased by several thousand tons each year.

A new mixed feed plant has been planned for Viljandi, with a capacity of 725 tons a day. But to this day it is not known when construction can begin. The problem is more than serious, and I think that there should be no delay in construction.

A parallel development to the progress of the state mixed feed industry is the necessity for the republic's kolkhozes and sovkhozes to build feed plants to process their own grain. Enterprises located far from state mixed-feed plants should build their own facilities. Enterprises close to concentrated feed plants could bring their grain to be processed in exchange for mixed feed. The elevator capacities at Valga, Tallinn, and Keila must be expanded. We plan to build new elevators at Viljandi, Elva, and Jogeva. This year we took delivery of the Polva elevator; one is under construction at Rakvere. On the other hand, the reconstruction of concentrated feed plants and increases in their capacities create serious shortages of storage space. We must take into account local conditions and select the storage facilities that are most practical for a specific locality. In the current and the following years, we must increase the capacities for unloading grain and raw materials from railway cars, remembering that unloading cannot exceed the allocated time. A comprehensive plan of action for each combine has been drawn up to eliminate these difficulties in due time. The combines' work to a large degree depends on how the raw materials are received. We receive most of the wheat we use from fraternal republics; it is delivered by several oblasts of the RSFSR, and the Kokchetav and North Kazakhstan oblasts of the KaSSR. Cotton and sunflower cakes come from Uzbekistan, Moldavia, and the Ukraine, salt comes from the Ukraine, feed chalk and feed phosphate from Byelorussia, feed yeasts from even further away. This shows that our flour, cereal, and concentrated feed industry is based on an inter-republic division of labor, and I must stress that cooperation obligations toward us have been completely fulfilled. We have greater problems with receiving bone meal and powdered skim milk from our own producers. From year to year and quarter to quarter hundreds of tons of animal protein have not been delivered to the concentrated feed industry, and unfortunately there was another shortfall of 156 tons of bone meal and 244 tons of skimmed milk powder in the third quarter of this year. Naturally, this paralyzes production of mixed feed a whole, and the balancing of feed with animal protein.

To date, the problem of transporting finished products from feed factories and from mills to the consumer has remained unsolved. Since the combines have no transportation capability, the distribution of finished products is the responsibility of transportation enterprises. The eighth truck base in Viljandi fulfilled the assumed responsibility for hauling finished products to the users in an exemplary fashion. The grain combine is not faced with the problem of storage overflowing with milled products. The situation with the sixteenth truck base in Keila is just the opposite, both in 1980 and this year's first half. That truck base hauled only 16 percent of last year's Keila output to the various enterprises. This meant that sovkhoz and kolkhoz trucks had to be used for

84 percent of feed distribution. Of course the enterprises had not allocated a single liter of gasoline for these hauls in their production and financial plans, but still the feed had to be gotten to the farm. Truck transport bases last year hauled only 67.2 percent of the amount of concentrated feed stipulated in annual agreements, so that enterprises had to bring in almost 33 percent themselves. The sixth truck base in Haapsalu met 60.8 percent of its annual feed haul plan, the twenty-first truck base in Tamsalu 61.4 percent, the ninth truck base in Valga 80 percent, and the "Tallinn Truck Lines" 80.9 percent. Things have not improved greatly this year. What will happen next? If we approach the needs of animal husbandry with the attitude that once other tasks are done, then feed can be hauled, the supply of feed to animal growers will become even more complicated.

There are also other problems. The poor progress of construction is especially troublesome. Last year the construction organization of the republics concerned with the comprehensive equipping of the Tamsalu Grain Products Combine did not deliver capital construction valued at 3.2 million rubles, including 105 residential units. Last year 3.3 million rubles, including funds obligated for a residential complex with 60 units went unspent at the Keila Grain Products Experimental Combine. We are convinced that in cooperation with the Ministry of Construction and the many other construction organizations involved with our projects, we will finish the planned buildings.

Much that is new and modern in the field of management and work organization has been implemented in our plants. For example, in 1979 we became the first ministry to calculate net production normatively; something that has now been adopted by several ministries. Six combines have begun to organize work by brigades. During the last five-year plan, the collectives established goals for socialist progress.

We have reserves for increasing labor productivity, especially in the Keila and Tamsalu combines.

Now to the other side of our work, which is concerned with the organization of agricultural products procurement and their quality. This year was peculiar in that nature grew the harvest and then took some of it back. But in spite of everything, the republic's farmers met the target grain sale quota of 155,000 tons by the thirty-seventh anniversary of the liberation of the ESSR capital Tallinn from Fascist occupation, and to date, more than 171,000 tons of grain have been sold to the state.

But there is still much to be done to produce high quality grain. It is first of all necessary to build modern drying and storage facilities in every enterprise.

From year to year the volume of grass meal delivered to the concentrated feed industry has increased, but unfortunately the quality has decreased. The proportion of grades I and II has declined and that of grades 4 and 5 has risen. The quality of grass meal is hurt by low cerotene and protein content. This could be partially prevented if the grass mass would not be left standing to heat up for long periods before processing and if other factors degrading quality would also be eliminated. Unfortunately, the enterprises themselves suffer great losses when they produce low-quality grass meal, since energy and all other expenses will not be recouped. I think that in the interest of raising quality, at least two enterprises close to concentrated feed plants should specialize in the production of grass meal, with the most modern technology to be applied and the material incentives of the enterprises to be guaranteed.

Now that a Ministry of the Fruit and Vegetable Industry has been established and charged with basic tasks in potato, vegetable, and fruit growing, I would on behalf of the Procurement Ministry like to express the wish that the new ministry gradually solve the difficulties so that the best quality potatoes, vegetables, and fruits will reach the dining tables of the population.

In the 10th Five-Year Period procurement of meat in the republic increased by 23.6 percent. The average market weight of cattle rose from 397 kilograms to 441 kilograms. The increase of live weight expanded the procured meat by 43,000 tons or an average of 3.9 percent. This meant an additional R12 million for the enterprises.

There was also an increase in the proportion of better-fed cattle, especially calves. The weight of young cattle procured rose by an average of 31 kilograms in the 10th Five-Year Period. The increase of live weight allowed an additional sale of 43,900 tons of beef to the state. The procurement of milk has focused on improvements in marketability and quality, and this direction will be followed during this five-year period as well. At the same time, the milk fat content rose by 0.06 percent over the base (3.5 percent) which allowed for an increased milk procurement of 62,000 tons. In summary, it can be said that improved marketing and quality resulted in the procurement of 143,000 tons of milk and that the state paid R35 million to the enterprises for that milk. The enterprises of our republic have done a gratifying job throughout the years in raising milk quality. The milk sold to the milk industry has been 92.5 percent first grade. The production and procurement of high quality milk in such amounts was made possible due to the efforts and cooperation of enterprises and procurers.

Centralized transport of milk has been an effective method in improving the quality and managing the procurement of milk sold to the state. Currently 76 percent of milk is centrally procured.

In the forefront of delivering high quality milk are Viljandi, Kingissepa, Jogeva, and Rapla rayons. There the proportion of first grade milk amounts to 93-95 percent of procurement. Many enterprises, such as the Olustvere sovkhoz, the "Lembitu" kolkhoz in Viljandi rayon, the "Tasuja" kolkhoz in Rapla rayon, and the "9 May" kolkhoz of Paid rayon, etc. sell only first grade milk.

In the procurement of eggs the principle of direct transfer of eggs to stores, dining facilities, and the food industry has been generally adopted. Currently poultry farms sell 96.2 percent of the eggs directly to retailers and other customers.

The personnel of the Procurement Ministry system have discussed the shortcomings of previous work self-critically and have developed specific guidelines for solving tasks derived from the decisions of the CPSU 26th Congress. We will pay particular attention to using existing reserves to use electricity, fuel, and raw materials more economically, to increasing the productivity, to observing the work of champion workers and to implementing their experiences broadly.

The procurement of meat and milk in the last months of the year depends on the management of the transition period and on maintaining production. Current projections indicate that in the last quarter meat and poultry will be sold at a somewhat higher live weight than last year.

Now, with some 2 and a half months remaining until the end of the year there is feverish work for farmers and procurement workers and for all personnel of enterprises processing and marketing farm products. After all, the proverb says that one fall days feeds the year. Let us then do everything in our power to make the results of the first year of the 11th Five-Year Plan into a worthy stepping stone toward the next.

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AGRO-ECONOMICS AND ORGANIZATION

KIRGHIZ PROCUREMENT MINISTER ON 'DIRECT CONNECTIONS'

Frunze SOVETSKAYA KIRGIZIYA in Russian 13 Nov 81 p 2

/Article by M. Umuraliyev, KiSSR minister of procurement: "Develop Direct Connections"/

> /Text/ /What is hindering the Tokmakskaya Preliminary Wool-Processing Factory from conducting output procurement on the basis of direct connections./ /in boldface/

Kirghizia's farms have been engaged in sheep raising for a long time and extensively; they obtain a considerable amount of fine wool. Calculated in terms of weight, more than 200,000 tons of it were sold during this past five-year plan. Sheep raising accounts for 34 percent of this republic's agricultural commodity output and 43 percent of the profits received by kolkhozes and sovkhozes. This sector will be developed even more extensively during the current and successive five-year plans.

But wool production has not increased enough. The CPSU CC and the USSR Council of Ministers pay constant attention to perfecting the forms of output procurement. This has found reflection in the decisions of the 26th Party Congress. In the "Basic Trends of the USSR's Economic and Social Development for the Years 1981--1985 and for the Period until 1990" provisions have been made for further developing direct connections between the processing enterprises and the kolkhozes and sovkhozes.

In Kirghizia such work has been conducted for a number of years already. Last year 79 farms in accordance with contractual agreements, by-passing middle-men, procurement offices, and consumer cooperatives, sold wool directly to the Tokmakskaya Preliminary Wool-Processing Factory (POSh). Direct connections have developed thanks to a strengthening of the material-technical base of the kolkhozes and sovkhozes, the training of skilled sheep-raising personnel, which allows us to carry out the sorting and preparation of the wool for delivery to the industrial enterprises without middle-men. Another reason why this has become possible is that the Tokmakskaya POSh Factory was built on this republic's territory; it has a production capacity designed for the reception and preliminary processing of all the wool produced in Kirghizia.

Let us note that the transit shipments of wool, which have gradually grown into purchases of it by means of direct connections, have become an important factor for reducing procurement outlays. Product quality is maintained, while its losses in transport are reduced, since there is no longer any need for intermediate loading and unloading or warehouse storage while the shipment is being re-sorted. In short, the direct connection between the farms, which are the output producers, and the processing industrial enterprise is mutually advantageous. This form of procurement will subsequently permit the delivery and reception of wool to be organized directly on the farms. At the same time the direct connections increase the responsibility of the shippers.

This may be visibly traced using the example of the Kolkhoz imeni Kalinin, Panfilovskiy Rayon, which has been shipping out wool on a direct-connections basis for almost 10 years. The wages of the shepherds, shearers, laboratory workers, and sorters here are directly dependent on the quality and quantity of the wool which is produced and sold to the state. It is precisely this form of reciprocal relations between the farm and the POSh factory which has impelled us to evaluate the work of the kolkhoz members by the end result--finished fiber. Now the plan for the shepherds' brigades is devised solely by taking this indicator into account, which, of course, stimulates the efforts of everybody to improve the fleece quality.

Of course, a great deal was done here to create the necessary base. At present the farm has a well-equipped laboratory, an up-to-date shearing station has been built, skilled shearers have been trained; this is of no small importance in determining the output of finished fiber. In recent years the Tokmakskaya POSh Factory, when it receives wool from the kolkhoz, trusts the grading which the latter has done on the raw material. This speeds up the receiving process. The clean wool, correctly arranged by grades and fleece condition, is easily sorted at the factory, which considerably facilitates its industrial washing. Because of the improvement in the quality of the wool and the correctness of its grading, the sales cost of a kilogram of it has risen during the past three years from 6.29 rubles to 7.61 rubles in 1980. In addition to the cost of the wool, the farm over these years has received an industrial mark-up in price, which previously had been paid to the middle-man, i. e., to the consumer cooperative procurement office, amounting to a total of about 8,000 rubles. These funds have gone into strengthening the material-technical base and towards providing incentives for the sheep-raising workers.

One could also cite other farms where direct connections have had an effect on improving the quality of the wool being procured. The production farm of the Orgochorskaya Experimental Sheep-Raising Station in Issyk-Kul'skaya Oblast last year sold Merino wool which was basically normal in its condition. The average price of a kilogram of it reached nine rubles. Thus, the farm obtained an impressive sum from its wool sales, if we take into consideration the fact that it sold more than 200 tons of it to the state. The Kyzyl October Sovkhoz in Kemingskiy Rayon also supplied fine wool to the state; the average sales price of a kilogram of it amounted to 8.72 rubles. On the whole, the republic's farms which have converted to the direct-connections system, due to the improvement in wool quality, have received an additional 2.2 million rubles in comparison with the previous year and, in the form of an industrial price mark-up--almost 200,000 rubles.

Unfortunately, this progressive method is having great difficulty in making headway. In the Tyan'-Shan'skiy Rayon, for example, there has appeared an amazing lack of understanding of the essence of the changeover to the sale of wool by direct connections which are mutually advantageous. There are also some farms which have violated their agreed-upon obligations to the POSh Factory. One of the reasons is the fact that a considerable portion of the kolkhozes up to now do not have laboratories to determine the percentage of finished fiber being turned out. Farms cannot obtain the necessary instruments and preparations for the laboratories, but these are extremely necessary everywhere, regardless of whether the farm sells wool on the basis of direct connections or through a middle man. The fact is that in the 11th Five-Year Plan the plans for purchasing wool have been approved in terms of finished fiber. If a farm lacks a laboratory, it is compelled to operate by guesswork.

Complaints could also be lodged against the republican and zonal laboratories for wool quality, which are under the jurisdiction of the republic's Ministry of Agriculture. They ought to render methodological and practical aid to the kolkhozes and sovkhozes in preparing the wool for sale. But the yield from these laboratories is too small, since during the period of mass sheep-shearing their workers and specialists are almost never on the farms.

The principal reason, however, is the conservatism of the managers of the Tokmakskaya POSh Factory and the republican Ministry of Light Industry, under whose jurisdiction it is. At first they advanced various excuses for not adopting direct connections. For example, they demanded an increase in the staff of specialists. But when the factory was given permission to maintain them for organizing procurements on the basis of direct connections, then for five years the staff positions have remained completely unfilled. The grader-specialists do not drive out to the kolkhozes and sovkhozes which have converted to direct connections, nor do they render skilled aid to them. Errors and shortcomings in preparing raw material for sale are repeated year after year.

To the present day this enterprise has not solved a number of problems. In particular, ways have not been determined for the factory to use the sums of the industrial price mark-ups which are formed when the wool is purchased without a middleman. These funds are substantial: in 1980 they comprised more than 200,000 rubles. It seems to us that the USSR Ministry of Light Industry should decide this question in principle. It is high time that the factory began building additional warehouse areas for storing the control packs of wool from all batches coming in from the farms.

It is impossible to leave out of consideration the fact that direct connections have become an objective factor and that they will be developed. This is being facilitated by the working out of standard with regard to unifying the basic indicators for the quality of unwashed and washed wool which will make it possible to bring grading closer to sorting. And this means the following: the factory ought to take part in the final evaluation of wool quality directly at the shearing stations of the farms.

The following question arises willy-nilly: would it be possible within the organizational structure which has taken shape to ensure full coordination of production and the preliminary processing of the wool? Here one can hardly find a simple, satisfactory answer. Practical experience has convinced us more and more that this problem could have a comprehensive solution if both its component parts--production and the processing of the output--were concentrated in the same hands, in one department. An obvious example of this is the agro-industrial association. Is it not time to re-examine the feasibility of having the POSh factories belong to the system of the Ministry of Light Industry? It would be much more rational to transfer such factories to the jurisdiction of the Ministry of Agriculture, as has been done with the Kara-Kul sheep-raising plants.

The development of the purchasing of wool on a direct-connections basis is a matter of great importance to the state. And all the obstacles which are holding this back must be eliminated.

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AGRO-ECONOMICS AND ORGANIZATION

PRIVATE SECTOR EXAMINED, EXPLOITED

Development in Kirghiz SSR

Frunze SEL'SKOYE KHOZYAYSTVO KIRGIZII in Russian No 10, Oct 81 pp 30-31

[Article by O. Osmonov, instructor of Kirghiz Agricultural Institute imeni Skryabin: "Private Economy -- General Concern"]

[Excerpt] A principal vital activity of kolkhozes is their production function. At the present time, the republic's kolkhozes are accounting for approximately 51 percent of the overall volume of gross agricultural output. This fact clearly testifies to the place and role played by the kolkhozes during this modern stage in their development.

In kolkhoz production and in the lives of the kolkhoz members, special importance is attached to the private plots, since it is here that national, group and private interests are intertwined. The changes taking place in the private economy are affecting not only kolkhoz peasantry life but also society as a whole, since the private economy is an important source of income for kolkhoz families and it plays a definite role in gross agricultural production and in supplying the municipal populations with agricultural products.

From the very first days of its existence, the private plot of a kolkhoz member has been inseparably aligned with public production. It is carried out on kolkhoz land and it involves the use of public implements and means of production. The norms for a private plot are defined in the regulations of a kolkhoz. Since the private economy is one means for the reproduction of manpower, the labor performed in it is considered to be of a public nature. Although a definite portion of the products obtained from a private plot is sold on the kolkhoz market, the private economy is nevertheless considered to be of a consumption nature. Yes and the trade is conducted in the interest of private conumption and not in the interest of profit. While selling some goods, the kolkhoz member purchases other types of goods.

During this modern stage, a kolkhoz, while paying wages for labor performed, is still unable to supply the kolkhoz members with all of the food products required. These products are not available in sufficient quantities in state and cooperative trade in the rural areas. Moreover, the cooperative trade network has not yet been developed to the point where it can make good forms of public catering available in all kolkhoz villages.

The communist party and Soviet Government, taking into account the objective conditions and available potential, have clearly defined the role to be played by the private plots of kolkhoz members under the conditions imposed by developed socialism. "The kolkhozes and sovkhozes have been and continue to be the foundation for socialist agriculture" commented L.I. Brezhnev in the accountability report to the 26th CPSU Congress, "but this is in no way meant to imply that we can overlook the opportunities afforded by the private plots. Experience testifies to the fact that such farms can provide substantial assistance in the production of meat, milk and certain other products. The orchards, gardens, poultry and livestock that belong to workers represent a portion of our overall wealth."

In conformity with the regulations, the family of a kolkhoz member is presented with a tract of land for use as an orchard, garden or for other purposes. The family is entitled to have a definite number of livestock, bee colonies, poultry and rabbits. Within the norms established in the Model Regulations, each kolkhoz defines in its own regulations the number of livestock that the family of a kolkhoz member is permitted to have.

Under present conditions, a private plot continues to be an important source for further levelling off the incomes of various population groups. In the interest of revealing more clearly the role played by private plots in the lives of kolkhoz members, let us examine the income structure of a kolkhoz family. At the present time, the structure for total income of a kolkhoz member consists of 47.3 percent from the kolkhoz, 27.5 percent from the private plot and the remaining amount being provided in the form of pensions, grants, various allowances and other income from public funds. This then bears out the fact that, even taking all differences into account, a private plot for any kolkhoz family in the republic, just as in the past, continues to be an important source for obtaining food products and monetary income.

The nature of the attitude towards a private plot is presently being influenced by a number of factors: the wage level, structure and size of the kolkhoz family, professional training, growth in material and spiritual needs and so forth. As a rule, in large families, where the parents and relatives are of pension age, the private plot is larger and better maintained. The growth in the number of specialists, especially among the youth, has promoted the desire to be released from having to maintain a private plot. Today there is a definite group of kolkhoz members who do not wish to operate private plots and who are finding various reasons for not doing so.

Statistical data reveals that over the past 15 years a reduction has taken place in the overall amount of kolkhoz farmland being used on a private basis by kolkhoz members. In addition, a trend has also been observed towards a reduction in the number of livestock being maintained on the private plots. This runs counter to the country's economic requirements and it adversely affects the supply of food products for city populations. This has come about owing not only to a lack of desire on the part of a definite group of kolkhoz members with regard to operating private plots, but also because of the difficulties involved in maintaining them.

Some kolkhoz managers are not devoting proper attention to the development of the private plots of kolkhoz members. Indeed the Model Regulations for a Kolkhoz contains special articles which require a kolkhoz administration to furnish assistance to its members, in the manner established by the kolkhoz, in tilling the private plots, acquiring livestock and obtaining zooveterinary services and it must also ensure that the livestock are provided with feed and pastures. This responsibility of kolkhozes has been emphasized in the decree of the CC CPSU and the USSR Council of Ministers entitled "Additional Measures for Increasing the Production of Agricultural Crops on the Private Plots of Citizens."

This decree recognizes the need for implementing additional measures aimed at improving the conditions under which private plots are maintained by kolkhoz members, manual and office workers and other citizens and also for raising the interest of kolkhozes, sovkhozes and other agricultural enterprises in achieving greater utilization of the potential offered by the citizen farms for increasing the production and sale of farming and animal husbandry products.

Deserving of attention in this regard is the experience of the Dyykan Kolkhoz in Dzhumgal'skiy Rayon in Narynskaya Oblast. Here the required material and moral conditions have been created for raising the interest of kolkhoz members in the maintenance of private plots. "The problems associated with the participation of kolkhoz members in the production of animal husbandry products are discussed regularly during meetings of the kolkhoz administration" stated the chairman of the kolkhoz administration N. Asanov, "Similar to the kolkhoz proper, the private plots also specialize mainly in the production of animal husbandry products." In all, there are 338 kolkhoz farmyards at the kolkhoz. Each kolkhoz family has one cow with a calf under 1 year of age, one head of large-horned cattle under 2 years of age, one horse with a pony less than 6 months of age, up to 20 sheep and goats with lambs and kids under 1 year of age and poultry. The kolkhoz members presently have at their disposal 1,352 head of large-horned cattle, 3,360 sheep and goats and 340 horses.

During the years of the Tenth Five-Year Plan, extensive use was made of collective feed procurements and many kolkhoz members raised alfalfa on a portion of their private plots. The kolkhoz members began purchasing livestock feed at procurement prices which were considerably lower than the retail prices. More assistance began to be furnished for acquiring livestock and poultry on the installment plan, with the kolkhoz making special funds available for this purpose. Natural meadows and pastures were set aside for permanent use by the owners of livestock. All of these factors served to create the best conditions for combining public and private interests at a kolkhoz. Kolkhoz families began to participate more actively in fattening animals for sale to the state.

As a result of a number of measures, the private plots of kolkhoz members became an important means for assisting in the production of animal husbandry products. During the 1976-1980 period, these farms sold 110.4 tons of meat and 21 tons of wool to the kolkhoz. Of these amounts, 24 tons of meat and 8 tons of wool were sold in 1980. Last year the volume of products produced on the private plots amounted to approximately 17 percent of the public production.

This obviously represents only a portion of the products produced on the private plots. Computations have shown that on the average only one fifth of the products obtained from the private plots is sold to the kolkhoz, with the remaining four fifths being consumed by the kolkhoz members and citizens themselves. It has been established that a kolkhoz family realizes an average annual income of more than 1,000 rubles, or 26 percent of its personal monetary income, from the sale of products. In addition, almost all of the family requirements for meat, milk, eggs and potatoes are satisfied by means of the private plot.

Commencing in early 1981, senior class students of a secondary school at Kol-Aryk undertook to fatten lambs at the kolkhoz. Unfortunately, the participation by the students is limited by the kolkhoz's feed base. As a result of diligent labor performed over a period of 5 months this year, more than 3,000 lambs which had been distributed among the students were preserved entirely.

In the opinion of specialists and the kolkhoz members themselves, the kolkhoz must furnish the private plots with more systematic and organized assistance in acquiring pedigree livestock, high quality seed, good grazing land and feed and more extensive use should be made of collective feed procurements.

In connection with all of the above, we are unable to agree with the opinion of some agricultural specialists who maintain that the private plots of kolkhoz members only serve to hinder the development of kolkhoz production. To the contrary, they play a definite role within the system of intrakolkhoz production relationships. According to statistical data, the employment of able-bodied kolkhoz members in the public sector throughout the republic is still considerably lower than the average employment of the country's able-bodied population. But the maintenance of a private plot absorbs a portion of the labor expended by kolkhoz members, thus ensuring them more complete employment. Pensioners, juveniles and housewives are drawn in to this type of production work. At the present time, pensioners, invalids and women not working on a permanent basis in public production are accounting for one half of the working time being expended on the private farms.

In connection with the sale of products obtained from private plots, a very important role is played by flexible procurement prices and a well organized system for furnishing information on market requirements. In the process, consideration should be given to the psychology of the new peasantry, which likes the market less and less, feels uncomfortable behind counters and has no time for this work. Thus a need exists for expanding the commission trade, with the products being procured at the site. All of these measures, by raising the productivity of the private plots and also reducing the labor expenditures involved in the sale of surplus products, will create better conditions for combining private and public interests at kolkhozes.

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Livestock Purchase Terms Listed

Minsk SEL'SKOYE KHOZYAYSTVO BELORUSII in Russian No 10, Oct 81 p 27

[Article by Ya.V. Zhigarevich, chief of the State Inspectorate for Procurements of Animal Husbandry Products of the Ministry of Procurements for the BSSR: "New Developments in the Procurement of Animal Husbandry Products"]

[Text] A.N. Minina in the city of Kalinkovichi in Gomel'skaya Oblast has requested information on new developments in the organization of animal husbandry procurements from the population. In this article, the chief of the State Inspectorate for Procurements of Animal Husbandry Products of the Ministry of Procurements for the BSSR, Ya.V. Zhigarevich, responds to our reader.

At the present time, the members of kolkhozes and and sovkhoz manual and office workers throughout the republic have available for their private use 18 percent of the large-horned cattle, including 33 percent of the cows, 37 percent of the swine and 22 percent of the sheep being maintained on all categories of farms. This constitutes a great reserve for the production and procurement of animal husbandry products. It is sufficient to state that during 1980 550 kilograms of milk were procured per cow available on the plots of kolkhoz members and sovkhoz manual and office workers and also large quantities of meat, eggs, wool and other products.

The decree adopted at the beginning of this year by the CC CPSU and the USSR Council of Ministers concerning additional measures for increasing the production of agricultural products on the private plots of citizens requires the party, soviet and economic organs to create the conditions -- both material and moral -- which will raise the interest of citizens in maintaining private plots.

Commencing this year the sovkhozes and kolkhozes are authorized, on a strictly voluntary basis, to conclude agreements with kolkhoz members, manual and office workers and other citizens, who reside on their territories and who participate conscientiously in public production, for the raising and procurement of livestock and poultry and also surplus milk.

The forms for the standard agreements are available at each kolkhoz and goskhoz. These agreements set forth the responsibilities of the farms with regard to furnishing assistance to the kolkhoz members and manual and office workers, by providing them with young livestock and poultry, feed and tracts of land on which to procure hay and graze their livestock. On the other hand, those citizens who accept livestock and poultry for raising bear complete responsibility for their proper handling.

If the citizens so wish, up to 20 percent of the livestock and poultry offspring can be sold to them at the prices stipulated in the agreement.

The sale of feed to citizens for the raising of young livestock and poultry is carried out in the following manner: internally produced feed -- grain -- at state procurement prices, other feed -- in accordance with their planned production costs and purchased feed -- according to the prices for procuring it, including delivery expenses.

The issuing of construction materials and the carrying out of work associated with the construction and equipping of facilities for the maintenance of livestock and poultry are performed by agricultural enterprises in accordance with the prices paid for procuring the materials, including delivery expenses, but no higher than the state procurement prices and actual wages based upon the appropriate primary documents.

Services associated with the tilling of a tract of land and the procurement and deliveries of feed and construction materials -- in accordance with the planned production costs for the current year.

Cattle and poultry procurements are formalized in a document and surplus milk -- in a receiving-accounting log. The livestock and poultry are accepted on the basis of live weight and state of nourishment and milk -- according to quantity and quality (fat content and so forth). Payment is made according to the prices agreed upon, but no higher than the established state procurement prices. They are as follows: for 1 kilogram of live weight of large-horned cattle in a high state of nourishment -- 1 ruble and 90 kopecks; average -- 1 ruble and 58 kopecks; lower than average state of nourishment -- 1 ruble and 19 kopecks and skinny cattle -- 95 kopecks.

Bulls of the first category are paid for at the prices for large-horned cattle of a high state of nourishment and those of the second category -- according to the prices for cattle of average state of nourishment. Calves of the first category -- according to the prices for cattle of average state of nourishment and those of the second category -- according to prices for animals of lower than average state of nourishment.

Young pigs of the first category (young bacon pigs) are paid for at the rate of 2 rubles and 10 kopecks per kilogram of live weight; second category (young meat pigs) -- 2 rubles and 5 kopecks; third category (fat-type swine, including sows and hogs) -- 2 rubles and 5 kopecks; fourth category (hogs and sows) -- 1 ruble and 40 kopecks; fifth category (suckling pigs) -- 2 rubles and 50 kopecks and skinny (sub-standard) swine -- 1 ruble and 13 kopecks.

For 1 kilogram of live weight of chicken, the payment is 1 ruble and 68 kopecks, duck -- 1 ruble and 65 kopecks, goose -- 1 ruble and 60 kopecks, turkey and guinea hen -- 2 rubles and 24 kopecks.

Milk procured from the population that lacks a definite grade is paid for at the rate for second grade milk, that is, 25.4 kopecks per kilogram of basic fat content. The accounts with citizens for livestock and poultry procured from a plot are paid within a 10 day period following their acceptance and for milk -- no less often than once a month.

Citizens who for certain reasons did not conclude agreements this year for livestock, poultry and also milk procurements can sell their surplus animal husbandry products to kolkhozes, sovkhozes and livestock receiving bases of the Belglavskotoprom System in accordance with the procedures and conditions which existed earlier.

A considerable amount of work was carried out this year in connection with increasing the number of private plots of kolkhoz members, sovkhoz workers and office workers engaged in the production and sale to the state of surplus animal husbandry products. Agreements were concluded for 87,000 tons of livestock and poultry and also for 425,000 tons of milk. Improvements have been achieved in the supply of coarse and succulent feed for the private livestock of kolkhoz members, sovkhoz workers and office workers and also in the system for procuring animal husbandry products. This work has been organized especially well in many rayons and on farms in Grodnenskaya and Vitebskaya Oblasts and in Baranovichskiy, Uzdenskiy, Slutskiy and Goretskiy Rayons.

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Cattle Purchase Advantages

Dushanbe SEL'SKOYE KHOZYAYSTVO TADZHIKISTANA in Russian No 10, Oct 81 p 62

[Article: "Privileges Extended in Connection With Purchase of Livestock"]

> [Text] What advantages or privileges are extended to citizens who desire to purchase a cow or other livestock?

The state provides for assistance to be furnished to those desiring to purchase a cow or who wish to raise other livestock on their private plots. For acquiring a cow, credit in the amount of 500 rubles is extended to kolkhoz members and manual and office workers and for acquiring a heifer -- up to 250 rubles. By agreement with the professional trade union committee, sovkhozes and other enterprises are authorized to use their economic incentive funds for paying off up to 50 percent of the credit extended for the procurement of cows and heifers to manual and office workers who perform in a conscientious manner at these enterprises and also to teachers and doctors who work and reside on the territories of these enterprises. This privilege is also extended to include pensioners who have worked for an extended period of time at the mentioned enterprises.

It is recommended that kolkhozes also employ this system.

The kolkhozes, sovkhozes and other agricultural enterprises are obligated to raise young livestock and poultry and to sell them to the population in quantities which will satisfy the private plot requirements of the citizens, taking into account the need for raising livestock and poultry in accordance with agreements reached with kolkhozes, sovkhozes and other agricultural enterprises and organizations of consumer cooperation.

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Appeal for Surplus Production

Minsk SEL'SKAYA GAZETA in Russian 21 Oct 81 p 4

[Article by Main Administration for Procurements of Belkoopsoyuz, Belkooptorgreklama: "Comrade Kolkhoz Members, Manual and Office Workers!"]

> [Text] Sell your surplus animal husbandry products to the republic's procurement organizations of consumer cooperation.

Large-horned cattle, swine, meat, fat and eggs can be sold, at agreed upon prices and in unlimited quantities, to livestock slaughtering points, trade and public catering enterprises and traveling procurement specialists of consumer cooperation.

It is both profitable and convenient for suppliers of agricultural products to conclude agreements for the sale of their surplus products to procurement organizations of consumer cooperatives.

An agreement for the sale of one or several types of products is concluded for 1 year or a number of years. In such instances, the suppliers are guaranteed the following by the consumer cooperatives:

-- timely marketing of the agricultural products;

-- the right to priority acquisition of goods which are in high demand;

-- the issuing of a monetary advance (if the supplier so wishes) based upon the products procured.

The livestock slaughtering stations of consumer cooperatives provide rapid and high quality services for the population. Here the carcasses are cut up in a skilled manner and made available for procurement and when livestock are slaughtered on a customer basis a veterinary doctor will issue a certificate attesting to the suitability of the slaughtering products for consumption.

For the hides of animals slaughtered at livestock slaughtering stations, an additional bonus is paid out in the amount of 7 percent of the value of the hide and a payment is made for the intestinal raw materials at the price for 1st grade quality.

A veterinary certificate must be prepared for each animal sent for slaughtering. The meat obtained from farmstead slaughtering of animals is accepted only if it bears the stamp of the veterinary service.

All questions regarding this matter should be directed to the rayon procurement offices of consumer cooperatives.

Conclude agreements and sell your surplus animal husbandry products to the procurement organizations of consumer cooperatives.

Belorussian Official Expresses Concern

Minsk SEL'SKAYA GAZETA in Russian 31 Oct 81 p 2

[Article by Ye. Bogdan, chairman of the Executive Committee of the Novosverzhenskiy Village Soviet of People's Deputies, Stolbtsovskiy Rayon: "No Strangers in the Soviet -- All Are Friends"]

> [Excerpts] How the executive committee of the village soviet coordinates and controls the problems concerned with private plot development on its territory.

I cannot recall a session or meeting of the executive committee of our soviet at which a discussion was not held on the problems of private plot development. These problems are raised by life itself and they cannot be avoided or brushed aside. We are always having to deal with them. In particular, we have applied ourselves to this work in a persistent and purposeful manner following the decree of the CC CPSU and the USSR Council of Ministers entitled "Additional Measures for Increasing the Production of Agricultural Products on the Private Plots of Citizens." We have elected to follow the fine initiative displayed by the Kostenevichskiy Village Soviet in Vi 'skiy Rayon, where concern for private plot development has become a principal factor in the work of the local organ of authority.

I wish to state immediately that the executive committee of the council and the leaders of kolkhozes, enterprises and organizations located on our territory are devoting attention to strengthening and developing the village farmyards. A principal consideration at the present time is the fact that there should be increased interest among rural residents in having their own private plots. This is the type of mutual understanding that we are attempting to support. It makes no difference if an individual works at a kolkhoz, for raysel'khoztekhnika, at a local timber mill or in a production section of a packaging and repair enterprise. Rather, importance is attached to another factor: if he wishes to have his own plot, then he should be given such an opportunity and provided with maximum assistance. There are no strangers in the soviet; all are friends.

During one session of the village soviet, a statement was made by Yul'yan Petrovich Tsvirko, member of the executive committee and chairman of the Neman Kolkhoz. I recall how he stated: "The private sector aids a kolkhoz in carrying out its assigned plans. Thus we are under an obligation to provide assistance to the private sector."

In recent years, not only has there not been a reduction in the different types of poultry being maintained in the village farmyards, but in fact an increase has taken place. Some maintain poultry while others consider such work to be an unnecessary bother. We decided to take some action with regard to this situation. Prior to discussing the well known decree of the CC CPSU and the USSR Council of Ministers, we visited all of the homes; nobody was missed by the deputies of the village soviet or the members of village committees. The farmyard survey made it possible to determine how many head of large-horned cattle, swine and poultry had to be sold to the population. There were some people who had long ago disposed of their cows and now they decided to acquire them once again. Many had to replace their old low-productivity cows.

Generally speaking, the requisitions received from the villages were very revealing. In the case of piglets alone, the people wished to purchase 2,000 and ducklings and chicks -- 8,000. Certainly, our kolkhozes are unable to satisfy this demand either immediately or completely. We decided to do the following: to sell first heifers first of all to those who had no cows whatsoever and to carry out the replacement of low-productivity animals in a gradual manner -- little by little each year. The farms provided the people with hundreds of piglets for fattening. Many were advised to purchase them at the market. Indeed, many have their own transport and so no great difficulty is involved in making a short trip to Stolbtsy or Minsk. The Neman Kolkhoz and the Fanipol'skaya and Ivenets poultry factories made young poultry stock available to those desiring them.

The acquisition of livestock represents just one half of the task. Thought must still be given to feeding them or the entire undertaking will collapse. The Neman and Strana Sovetov kolkhozes set aside 260 hectares of cultivated pasture land for the summer grazing of privately owned livestock. Tracts of land suitable for this same purpose were procured at a forestry farm and a timber mill.

And then the indoor maintenance period for the livestock commenced. Once again, not one of the owners of cows had made arrangements. The manner in which they were to operate was to be decided by the farm administrations, based upon their own specific potential. Assisted by the aktiv alone, the executive committee provides assistance in distributing the feed. At the Strana Sovetov Kolkhoz, for example, tracts of perennial grasses are employed over an extended period of time. A different method is employed at the Neman Kolkhoz: baled hay is delivered directly to the yards of the kolkhoz members and office workers. One can appreciate how much time and effort this saves the people and how good an influence it exerts on the moral climate in each village.

Aware of the interest being displayed by the executive committee of the village soviet and the kolkhoz administrations in developing the private plots, the people are responding willingly to the request to sell surplus agricultural products to the state. It is now possible to summarize some of the results. For the village soviet as a whole, almost 700 tons of milk, or 1,447 kilograms per cow, have been procured since the beginning of the year. We sold 90 tons of meat -- an average of 60 kilograms from each village farmyard.

I wish to emphasize that milk procurements are being carried out all year long by our village soviet. Constant control is being exercised over this work by the executive committee of the soviet, the deputies and the activists. For example, I receive a daily report on the course of product deliveries in each village. If somewhere there is a reduction in the work tempo, action is immediately taken to ascertain the reason and subsequently the problem is corrected. Certainly, a principal concern is that of paying the people promptly for the products sold and also issuing mixed feed in the form of counter sales. There was one occasion when mixed feed, for one reason or another, was not delivered to the village of Markhachevshchina. Our deputies did not overlook this fact, but rather they raised it for discussion during a session of the soviet. The problem was corrected and thereafter milk once again began to flow to the receiving point in a rhythmic and continuous manner.

It would be incorrect to say that we have done everything possible towards developing the private plots. There are still some problems and other reserves are still available. Our senior deputy, Ivan Iosifovich Moroz, spoke correctly during a session of the executive committee when he discussed the need for more active development of rabbit husbandry. The leaders of the Starosverzhenskiy Secondary School are harboring a good intention -- to build a hothouse for the raising of vegetables. The executive committee has supported this initiative. And let there be no doubt: the school will have its hothouse. We are still discussing the possibility of supplementing the feed supplies through the use of unsuitable lands and forest tracts. The work being performed by many people is being directed towards achieving the same goal -- to produce as much output as possible. Both for themselves and for sales purposes.

Private Acreage Allocations Listed

Kishinev SEL'SKOYE KHOZYAYSTVO MOLDAVII in Russian No 9, Sep 81 p 59

[Article: "Depending Upon the Category"]

[Text] "Are rural residents -- doctors, teachers and workers who are not engaged in agricultural production -- entitled to tracts of land and if so to what degree?" such was the question posed by F. Frapchuk in the village of Trifautsy in Sorokskiy Rayon.

Private plots 0.25 hectares in size are presented to the families of individuals who permanently work and reside in rural areas, to teachers and instructors at general educational schools, boarding schools, specialized schools, children's pre-school institutes, professional-technical institutes, secondary specialized and other educational institutes, to doctors and medical and pharmaceutical workers, including junior medical personnel, to specialists working at agricultural enterprises and institutes and to workers attached to the associations of Goskomsel'-khoztekhnika, interkolkhoz and state-cooperative enterprises, organizations and their associations.

If at least one member of a family works at a kolkhoz, sovkhoz, sovkhoz-technical school or a sovkhoz-plant, that family is presented with a private plot no more than 0.30 hectares in size. Up to 0.25 hectares are made available to the families of disabled veterans of the Great Patriotic War and also to other invalids in Groups I and II.

Persons who reside in the rural areas, but who are not included in any of the categories enumerated above, can be assigned private plots up to 0.15 hectares in size.

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TILLING AND CROPPING TECHNOLOGY

MEASURES FOR INCREASING GRAIN PRODUCTION REVIEWED

Moscow PRAVDA in Russian 9 Feb 81 p 2

[Article by Ye. Khlebutin, corresponding member of All-Union Academy of Agricultural Sciences imeni V.I. Lenin: "From Sowing To the Harvest Campaign"; information similar to the material in this article published in JPRS 79492/1307, 20 Nov 81 pp 55-61]

[Text] For the Eleventh Five-Year Plan, the party has assigned the task of further increasing the production of grain. The average annual yields of grain must exceed considerably the level of the past five-year period. And this is fully understandable. The grain economy, as is well known, is the foundation for the country's food base and a stabilizing factor with regard to the development of the kolkhoz and sovkhoz economies.

At the present time, the achievement of the assigned goal is possible mainly based upon production intensification. Here we have in mind an increase in the cropping power of the crops, an improvement in the quality of the grain and thus satisfaction of the needs of all consumers of this important product. I would like to discuss in greater detail the solving of these problems.

There is no need for explaining that the inputs for success out on the grain fields are extremely diverse. This includes qualitative improvements in the technical arsenal of a farmer, the completion of complex mechanization in the cultivation and threshing of grain crops, post-harvest processing of the grain and its transporting and storage. Tremendous importance is attached to seed production, the use of chemical processes, improvements in the use of reclaimed lands and to the development and introduction of zonal and scientifically sound systems for farming and the management of a farm. In short, there is a broad field for activity. And not just for grain growers, but for industrial workers and scientists as well.

The efficiency of the branch can be raised substantially through the use of correct crop rotation plans. In the zone of insufficient moisture, where a large portion of the grain sowings are carried out, experience has shown that priority importance is attached to clean fallow. This obviously assumes that the land is properly tended. By skilfully employing the agricultural methods and fertilization recommended by science, many farms are obtaining high and stable yields here. A convincing example of this is the Rostov Gigant Sovkhoz, the experience of which became a type of classic for Soviet agronomy, familiar to agricultural specialists even beyond the borders of our country.

The farms in a number of rayons where there are ample moisture supplies can and must expand their grain crop areas. The feasibility of such a step is confirmed by the experience of leading collectives in the nonchernozem zone. The leading branch for a majority of the kolkhozes and sovkhozes is animal husbandry. Special attention should be given to the forage crops. Nevertheless, on a number of farms in this zone only 40 percent of the arable land, and at times slightly more, is being set aside for cereal grains.

In addition to a large quantity of grain, the country also requires diverse types of grain and high quality. Large quantities of it are consumed by farms, especially those which employ industrial technologies. Here complete ration mixtures are required, mixtures containing definite combinations of various types of cereal grains. Hence, this fact must be thoroughly taken into account when developing the structure for the area under crops. A considerable increase must take place in the production of forage crops, such as corn, barley and peas.

Wheat is occupying more than one half of our grain fields. As a rule, it surpasses the other grains in terms of its nutrient yield, especially protein. But it is inferior to them in a number of rayons in terms of cropping power and production cost. Wheat surpasses corn in those areas where the climate is warm and sufficiently damp. Millet and sorghum are grown in the dry steppe regions and rice on irrigated lands. In the more northern zones, it often proves to be inferior to grey grains. A scientifically sound distribution for production operations, an increase in the areas devoted to corn, barley and pulse crops and the active use of industrial cultivation technologies are making it possible to raise considerably the return being obtained per hectare, to procure more forage and to satisfy more completely the requirements of animal husbandry.

The quality of the bread grain does not always satisfy the requirements of the consumer. Soviet strong wheats have won international competitions based upon their protein content. And today they are being grown on considerable areas. Yet difficulties still persist with regard to supplying the national economy with good quality grain. Productive strong and durum varieties have been bred using good agricultural practices. The same must be done under production conditions if we are to obtain good grain.

Meanwhile, just as in the case of other grain crops, many farms are failing to employ the best "method" for their wheat. The soil is not prepared properly, insufficient fertilizer is being applied, the sowing work is not being carried out on a timely basis and the crops are being planted following poor predecessor arrangements and without taking into account the biological characteristics of a variety or the specific climatic conditions. The local party and economic organs must increase the demands being imposed upon the specialists with regard to mastering the new varieties.

At the same time, the collectives of scientific institutes must, as the saying goes, apply themselves more to the earth and to operational practice. Varieties are required which produce high yields under usual and not necessarily ideal conditions, varieties which are better able to endure the fluctuations caused by natural factors.

In addition to material and moral incentives for increasing the procurements of high quality wheat, additional organizational measures must also be carried out. The USSR ministries of agriculture and procurements must have farms and rayons specializing in the production of strong and durum varieties, with good conditions and appropriate bases being made available for this purpose. Improvements must be carried out in the system for accepting crops and maintaining accounts with suppliers and the construction of elevators should be accelerated and they should be located as close as possible to the fields. As yet, the specialists still have very little modern laboratory equipment at their disposal for determining the protein and gluten content in the grain.

In recent years the production of millet, buckwheat and rye has not proceeded as well as expected. The growing areas have gradually been reduced in size and thus the gross yields have fallen. This is particularly noticeable in Belorussia, in Voronezhskaya and Belgorodskaya Oblasts and in the Bashkirskaya and Chuvashskaya ASSR's. The same holds true for the pulse crops. The production plans for these crops have systematically not been fulfilled, for example, by the farms in Kurskaya, Tul'skaya and Penzenskaya Oblasts.

What are the reasons for this? There are several. First of all, the kolkhozes and sovkhozes are not displaying sufficient interest in expanding their sowings of these crops. They are less productive than other grain crops and require more care. Moreover, they lower the overall indicator for cropping power. The latter is a very important factor for labor collectives, especially when summarizing the results of a socialist competition.

The problem of increasing the grain resources should be viewed from the standpoint of ensuring that they are utilized in a correct and thrifty manner. For example, on many farms in the central chernozem region the proportion of concentrates in the livestock ration exceeds 40 percent and the return being realized from the farms is quite often low. Grain is an effective feed provided it is used in a protein-balanced ration and in combination with cheaper non-grain components. Cereal grains must be used to intensify the latter and should not be used as substitutes, as is still happening from time to time.

In the campaign to increase grain production, the local agricultural organs must employ material incentives in a skilful manner. The July (1978) Plenum of the CC CPSU, taking into account the increasing economic potential of the kolkhozes and sovkhozes, considered it advisable to improve the system of incentives for those who consistently raise the productivity of the grain branch and increase its profitability. In establishing the grain production and sales volumes for the state, a great role is played by the planning organs, who are tasked with taking into account the production base, the fertility of the farm land and the farm specialization.

The agricultural workers have the necessary potential at their disposal for successfully solving the grain problem. Importance is attached to concentrating the efforts of the farmers, machine builders, chemists and plant breeders in this direction -- all those who are responsible for this year's harvest as well as next year's.

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TWO-STAGE HARVESTING OF MILLET IN ORENBURGSKAYA OBLAST

Sverdlovsk URAL'SKIYE NIVY in Russian No 8, Aug 81 pp 49-50

[Article by V. Krasavin, candidate of agricultural sciences and senior scientific worker at the Orenburg Scientific Research Institute of Agriculture: "Two-Stage Combining in the Harvesting of Millet"; information similar to the material in this article published in JPRS 79492/1307, 20 Nov 81, pp 55-61]

[Text] An important and responsible period in the cultivation of millet is the harvesting of the crop. It completes the entire process devoted to cultivating the crop and it exerts a great influence on its quantity and quality. Numerous studies have shown that untimely and poorly organized harvest operations can result in grain losses of from two to six quintals of grain per hectare and in some instances these losses often exceed the increase in yield achieved through the use of an entire and effective complex of agrotechnical measures.

The correct selection of the harvesting method and the periods for carrying it out play a great role in reducing losses and bringing the actual (granary) yield closer to the biological yield. In order to do this, the biological characteristics of the crop must be taken into account.

Millet is characterized by a prolonged period of grain formation and irregular ripening of the grain in the heads. During the ripening process, it has a raised tendency to shatter. The grain is small and smooth and easily spills out through cracks and machine clearances. In addition, when fully ripe, the moisture content of the grain is 18-20 percent, the stalks and leaves -- 50-60 percent and a low ratio of grain to straw inhibits separating the grain out from the heap during threshing.

All of these factors serve to complicate the use of single-stage harvesting operations. Thus two-stage combining conforms best to the biology of this crop. The mowing of the millet should commence when 75-80 percent of the grain in the heads has ripened and it should be completed in no more than 3-4 days.
If the harvesting is prolonged for up to 7-10 days, great losses are observed as a result of shattering taking place while the crop is still standing. The technological qualities of the grain and the consumption properties of the groats also deteriorate.

Under production conditions, a determination is made as to the readiness of millet for harvesting by scanning the heads for the number of ripe grains. The ripe has a typical color and gloss for a particular variety. For accurate establishment of the degree of ripeness, a count is taken of the number of ripe grains in the heads and their percentage recorded.

When cutting down millet plantings into windrows, special attention should be given to the speed of rotation of the reel and to the cutting height of the harvester. The speed of rotation of the reel must conform to the forward speed of the harvester, otherwise the millet heads will be threshed and the cut stalks will not fall onto the harvester.

The cutting unit of the harvester is set for a cutting height of 14-15 centimeters. For such a stubble height, the millet cuttings are left in a raised position over the ground. Thus the mown bulk dries out rapidly and is easily picked up during threshing. In the case of a low cutting, the heads lie on the ground, the cuttings dry out slowly and a reduction takes place in the seed and marketable qualities of the grain. The cuttings do not fare very well if the stubble is high (more than 18 centimeters); this also leads to crop losses and to a reduction in its quality. Our studies have shown that during dry hot weather this work must be started when the moisture content of the air is no lower than 40 percent. This makes it possible to obtain from 1 to 3 additional quintals of grain per hectare and to raise the probability of obtaining seed from high reproductions.

A hair hygrometer or barothermohygrometer is used for measuring the relative humidity. In the steppe zones, the data from one instrument is valid for a radius of 40-45 kilometers. The work can be carried out based upon the time of day. For example, in accordance with observations conducted over a period of many years in the central zone of Orenburgskaya Oblast, during the month of August, the optimum moisture content (more than 40 percent) usually occurs between the hours of 2000 and 2300, it increases somewhat during the night and between the hours of 0800 and 1100 in the morning it drops lower than 40 percent. Thus the cutting down of millet into windrows should be carried out in the evening, at night and during the morning hours.

The windrows are threshed after they have dried out which, depending upon the weather conditions, lasts for 3-5 days.

Prior to commencing the threshing work, a solution must be found in advance for the problem of straw utilization on a farm. In terms of its feed value, it is the equivalent of meadow hay of average quality and has a green color, since its vital functions are not lost when the stalks and leaves are cut down.

The flow-line method of harvesting, with simultaneous mincing of the straw, is very effective. When this method is employed, the savings in direct expenditures amount to 4-4.5 rubles per hectare. In addition, a field becomes available more rapidly for the removal of stubble.

Control threshings serve to raise the quality of the harvest operations. They are carried out prior to commencing the mass pick-up of windrows, using a well adjusted unit. In the process, a check is carried out not only on the height of the crop but also on weediness and hulling of the grain. The data obtained is used for controlling the quality of the harvest work.

At times, owing to unfavorable conditions (frequent rainfall, winds, a shortage of nutrients and so forth), the grain of millet shatters for a considerable period of time prior to being harvested. As a result, 25-30 percent of the crop remains out on the field (with harvest losses included). And under dry conditions, millet drops may be preserved in the soil for more than 13 years. At the same time, strain changing is usually carried out every 5-6 years and a red grain variety may be replaced by a yellow grain variety or conversely. In such instances, it is impossible to obtain seed of high reproductions. So as not to contaminate a field with drops and assuming that the flow line method of harvesting with simultaneous mincing of the straw was not employed, the stubble should be loosened to a depth of 8-10 centimeters after the straw has been dragged. This will make it possible (assuming the availability of heat and moisture) for the drops to germinate in the fall. Thereafter they can be destroyed by means of the principal tilling. This method, in addition to combating millet drops, wild oats and perennial root-sucking weeds, also promotes improvements in the nutritional regime and a reduction in the lumpiness of the arable land. During a dry autumn period, when the drops do not germinate, such fields should ideally be left loose until spring. In the spring the drop seedlings can be eliminated through pre-sowing cultivations.

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7026
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GROAT CROP PRODUCTION IN CENTRAL CHERNOZEM ZONE DISCUSSED

Krasnodar SEL'SKIYE ZORI in Russian No 8, Aug 81 pp 20-21

[Interview with the deputy chief of the Main Production Administration for the central chernozem zone of the RSFSR Ministry of Agriculture Grigoriy Yakovlevich Vorob'yev, date and place not specified; information similar to the material in this article published in JPRS 79492/1307, 20 Nov 81, pp 55-61]

[Text] This year the plans for the sale of groat and pulse crops must be fulfilled completely -- such is the task set forth in the decree of the CC CPSU and the USSR Council of Ministers entitled "Additional Measures for Stimulating the Production and Procurement of the Grain of Buckwheat, Millet, Beans and Lentils."

The mentioned decree has become a turning point for farms and rayons engaged in the production of valuable bread grain. This is borne out by measures that have been undertaken in an important groat crop zone -- the central chernozem zone. Prior to the commencement of sowing of these traditional crops for central Russia, meetings were held in all areas by the boards of the agricultural production administrations of oblast executive committees, during which firm decisions were handed down calling for an expansion in the buckwheat and millet growing areas, elimination of the lag in their production and fulfillment of this year's procurement plans.

Our correspondent asked the deputy chief of the Main Production Administration for the central chernozem zone of the RSFSR Ministry of Agriculture Grigoriy Yakovlevich Vorob'yev to discuss the manner in which the decree of the party and government is being implemented throughout the zone and what the groat fields will be like this year.

[Question] Does the central chernozem zone contribute a large proportion of the overall production and procurements of buckwheat and millet for Russia?

[Answer] In terms of percentages, the proportions are not very great: for buckwheat -- 10 and for millet -- 5 percent. But when one cites absolute figures expressed in thousands of quintals of output -- a different impression is received. Nevertheless, it must be recognized that a great difference exists between the planned indicators and the actual gross yields of grain for these crops. Over the past 5 years, not one oblast in the central chernozem zone succeeded in coping with its procurement plans for buckwheat and millet. Moreover, the deliveries of these crops to the state, for the zone as a whole, decreased compared to the level for 1965. Whereas back at that time, 15 years ago, all of the oblasts with the exception of Voronezhskaya Oblast exceeded to a considerable degree their tasks for buckwheat grain procurements, 5 years later only the farms in Kurskaya Oblast were able to fulfill the state plan.

It is not difficult to isolate the causes for this falling behind. They were cited in the decree of the CC CPSU and the USSR Council of Ministers. Failure to attach proper importance to the food crops and insufficient attention given to them at all production levels, commencing with the kolkhozes and sovkhozes and ending with the agricultural organs. The absence of exactingness and strict requirements with regard to disruptions in deliveries alone can explain why the gross yields of buckwheat during the past five-year period fluctuated throughout the zone from 19,700 to 53,000 tons and millet -- from 75,900 to 229,300 tons. During some years, the cropping power of these crops fell to 3.9 and 5.8 quintals per hectare respectively.

Somehow the farms in the various areas succeeded in fulfilling their plans for the sowing of early spring grain crops, whereas in the case of the late grains, such as buckwheat and millet, smaller areas were set aside than originally planned: perhaps there will be no complaints. Following the grain harvests there were obviously reproaches, especially during those years when the grain procurement plans were disrupted. But in the autumn, when defining the crop rotation plans more precisely, the groat crops were again pushed to the background. They were planted on the worst ground, following poor predecessor arrangements and sufficient seed was not available in all areas.

There are some individuals who are accustomed to referring to the difficulties involved in the growing of buckwheat. True, it is a troublesome crop. This crop is not as drought resistant as millet, it requires well fertilized fields, moisture and warmth and, distinct from the majority of grain crops, it needs helpers -- bees, the numbers of which unfortunately continue to decline at the kolkhozes and sovkhozes.

Nevertheless, there are farms in the zone which can serve as models for the cultivation of buckwheat and millet. A number of farms can be cited in this regard: the Bol'shevik, Serp i Molot and Strana Sovetov kolkhozes in Oboyanskiy Rayon in Kurskaya Oblast, where 12-15 quintals of buckwheat per hectare are obtained annually and the Lipetsk Avangard Sovkhoz, which during the last five-year plan supplied the state with 3,500 quintals of buckwheat grain and realized a profit of more than 130,000 rubles. In this same Lipetskaya Oblast, the Krasnyy Kolos Sovkhoz obtained an average of 27 quintals of millet per hectare during the Tenth Five-Year Plan. There were years when 27-30 quintals of millet grain were obtained per hectare in Novousmanskiy, Semilukskiy, Buturlinovskiy and Talovskiy Rayons in Voronezhskaya Oblast. And at the Novaya Zhizn' Kolkhoz in Belgorodskaya Oblast, the cropping power for millet is approaching an average of 53 quintals per hectare. Let us see the degree to which the remaining farms have fallen behind the leading ones. Last year, a hectare of buckwheat in Kurskaya Oblast furnished an average of 4.3 quintals of grain and in Lipetskaya Oblast -- only 2.7 quintals. The yield was even smaller the previous year. The buckwheat potential on lands in Lipetskaya Oblast has fallen to 1.4 and in Tambovskaya Oblast -- to 1 quintal. The leaders and specialists have allowed this crop to become practically outdated, they consider it to hold little promise for the future and they had substituted other crops for it. Nor is the situation any better with regard to millet, the biological characteristics of which enable its plants to consume moisture in a thrifty manner throughout the entire growing season; its cropping power has gradually fallen to the per-hectare yields for buckwheat.

Meanwhile, it is appropriate to mention that during the first year of the Tenth Five-Year Plan, for Belgorodskaya Oblast on the whole, 8.3 quintals of buckwheat grain were obtained per hectare and in Voronezhskaya Oblast -- 8.1 quintals. The workers in Belgorodskaya Oblast can recall when the average millet yield for the oblast was more than 15 quintals per hectare. Thus the problem lies not so much with the biology of the plants or with the natural-economic conditions of the farms, as some individuals strive to insist in the various areas, but rather it has to do with those miscalculations which detract from the potential of these food crops.

[Question] What is now being done to ensure that each kolkhoz and sovkhoz absolutely fulfills its plans for selling the grain of valuable varieties of groat crops to the state?

[Answer] First of all, areas have been set aside for buckwheat and millet which guarantee a considerable increase in the gross yields of grain. The buckwheat fields in Kurskaya Oblast have been expanded by 2,000 hectares and in Lipetskaya Oblast -- by 1,000 hectares. In Tambovskaya Oblast, millet will be grown on 10,000 more hectares than was the case 1 year ago.

The largest millet area in the zone is in Voronezhskaya Oblast -- 124,000 hectares. There are approximately 70,000 hectares in Tambovskaya Oblast, 52,000 in Belgorodskaya Oblast and 46,000 and 38,000 hectares for this crop respectively in Lipetskaya and Kurskaya Oblasts. The geography for buckwheat sowings is somewhat different. More than 50,000 hectares of buckwheat are found in Kurskaya Oblast, up to 24,000 in Lipetskaya Oblast, 19,000 in Tambovskaya Oblast, more than 15,000 in Belgorodskaya Oblast and 14,300 hectares in Voronezhskaya Oblast.

The problem with regard to these areas is having them produce generous and not stingy returns for the concern displayed for them, making each hectare fertile and, commencing this year and in all types of weather, obtaining high yields from them. How can this be done?

The soils here are of the chernozem type and the climate moderate and suitable. No complaint exists with regard to the varieties. Both science and practical experience have confirmed that they are good for the zone in terms of both drought resistance and productivity. For buckwheat there are the Shatilovskaya-5 and Bogatyr' varieties and for millet -- Mironovskoye-51, Mironovskoye-94, Veselopodolyanskoye-367, Veselopodolyanskoye-632 and Volzhskoye-3. Over the past 10 years, at the Pavlovsk Strain Testing Station in Voronezhskaya Oblast, Volzhskoye-3 furnished from 20 to 44.7 quintals of millet grain and Mironovskoye-51 even more -- from 28 to 54.5 quintals.

Everything is dependent upon the farmers who cultivate the groat crops and upon the agronomists. The selection of good predecessor crops (mainly row crops). Mineral fertilizer applications in the fall at the time of the principal cultivation (for buckwheat -- mainly phosphorus fertilizers, to which it is especially responsive and for millet -- ammonia liquor). Timely and high quality preparation of the soil (harrowing and cultivation). The establishment of bee colonies on the buckwheat fields -- no less than 2-3 per hectare. The harvesting work carried out rapidly and without losses.

If proper thought is given to the above operations and if accurate technological charts are prepared, then the cycle of work carried out on the groat fields will be of the usual type. But, as emphasized in the decree, we now have in mind a complex of measures for further raising the cropping power and gross yields for buckwheat and millet and which would put an end to the deficit in valuable bread grain. This complex signifies first of all a rejection of undefined responsibility, which up until now has adversely affected the return from groat fields and the creation of specialized teams operating on the basis of the job contract plus bonus wage system. Secondly -- a higher level of agricultural practices and the conversion over to progressive technologies in all areas. Thirdly -- radical improvements in buckwheat and millet seed production, the conversion of such production over to an industrial basis and the accelerated reproduction of seed for new varieties, such that during the next few years it will become possible to sow these crops using only high quality seed. And fourthly -- the creation of new, highly productive, early ripening and drought resistant varieties, which will be suitable for mechanized harvesting and resistant against pests and diseases and which will furnish high quality grain.

Actually, such a complex of additional measures is presently being implemented on a majority of farms in the zone and it is hoped that this season the central chernozem zone will increase considerably its proportion towards the creation of a groat crop reserve in the Russian Federation. According to preliminary estimates, the harvesting of buckwheat grain in the zone, during the first year of the Eleventh Five-Year Plan, will increase to 123,300 tons and millet grain -- to 466,700 tons.

[Question] In your opinion, how will the incentive measures called for in the decree of the party and government affect the production level for buckwheat and millet in the zone and also the profitability realized from the cultivation of these crops?

[Answer] For centuries, buckwheat groat and millet have been considered to be valuable food products. Both city-dwellers and peasants are aware that the hominy, pancakes, cutlets, klotskas and puddings made from these crops are tasty and beneficial. Both of them contain a large amount of protein (12-12.5 percent) and they both serve as sources for carbohydrates (starch) and are readily assimilated by an organism. The protein obtained from buckwheat is rich in amino acids, it contains Vitamin B_1 and its fats are more stable during storage than the fats of other groat crops. There is good reason for it being used as a dietetic food. The desire by everyone to have an adequate amount of these products for their tables, sufficient to satisfy their requirements, is fully natural.

Our farmers have welcomed the material incentives called for in the decree. They are interested in increasing the groat crop harvests and gross yields. The kolkhozes and sovkhozes will now receive a 50 percent bonus added on to the procurement prices for buckwheat and millet, plus a bonus for high quality and above-plan sales. In our zone, these bonuses will add up to a considerable sum. In addition, commencing with this year, the counter sale of mixed feed or grain forage is being organized for the farms at the rate of 1 quintal for every quintal of buckwheat sold to the state. It would appear that this crop, bred from a group of grain crops, will now more fully serve the farms. Its sowing areas, harvests and gross yields of grain will be accounted for in the form of a separate line and the farm managers and specialists need not fear that its lower cropping power, lower for example than that for wheat and barley, will pull down the gross yield of grain. In the case of millet, it is known that its grain waste products were used earlier for feeding to livestock and poultry, with the straw and chaff serving as valuable feed for large-horned cattle, sheep and goats.

The material incentives called for in the decree of the party and government will bring about the creation, on a larger scale than is presently the case, of specialized subunits for the cultivation of groat crops, especially buckwheat. Moreover, the specialists attached to farms and agricultural organs must summarize and introduce into operations at all sites the experience accumulated in obtaining high and stable yields of buckwheat and millet grain. Just as with the cultivation of other crops, the measure of work performed by a farmer here must not be the overall volume of work completed or a count of the number of hectares plowed, cultivated or harvested, but rather the final result -- the grain obtained per hectare of crop.

Special importance is attached to carrying out additional measures aimed at stimulating the production of groat crop grain, establishing strict control over all work being performed out on the millet and buckwheat fields and raising the responsibility of the managers and specialists for their cultivation of groat crops.

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BRIEFS

MILLET SOWINGS EXPANDED--Kustanay--The development of millet production into an independent branch on farms throughout the oblast has made it possible to increase the yields of this groat crop. Specialized millet production teams have been organized at the kolkhozes and sovkhozes. The conversion over to cultivating the high-yield Saratovskoye-3 variety and new lands being made available for millet in all areas have produced fine results. Consequently, the farmers have expanded their millet sowings considerably this year. [Text] [Moscow GUDOK in Russian 20 Sep 81 p 1] 7026

KURSKAYA OBLAST GROAT CROPS--Kursk--The oblast's farmers have moved their equipment out onto the fields set aside for buckwheat and millet. Groat crops will be grown on approximately 100,000 hectares this year. On a number of farms the buckwheat fields are being expanded considerably. [Text] [Moscow GUDOK in Russian 19 May 81 p 1] 7026

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